

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

105th MONTHLY ISSUE

VIDEOCONFERENCING FOR EVERYONE:

**See and Talk With People
on the Internet, for FREE**

CREATING A WEB BBS:

Step by Step HTML Instructions

AOHELL:

**The Program America Online
Doesn't Want You to Have**

CYBERANGELS:

**"Guardian Angel"
Vigilantes Invade Cyberspace**

INVESTING ON THE INTERNET:

**Real-Time Quotes,
Research & Trading Options**

GOVERNMENT VS. THE PEOPLE:

**FBI Expands Wiretaps, Pentagon
Plans for "Information Warfare"**



\$4.95 U.S. & Canada

Wow! You can do all of

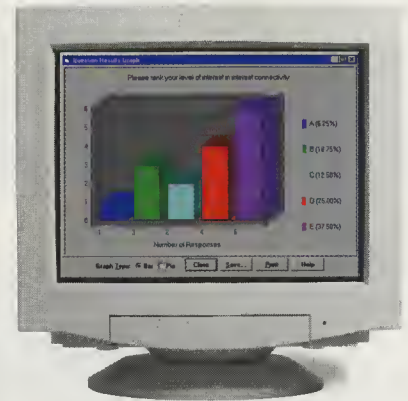
Users easily manage their mail online or offline with distribution lists, file cabinet, address book, in box, out box and more.



Create stunning menu screens, complete with hot spots, customizable buttons, list boxes, moving ticker displays, animation, sound effects and more.



Offer surveys, applications, tests, data collection forms and more, and allow users to immediately view tallied results online.



Configure up to 10,000 discussion areas or Internet newsgroups for users to exchange ideas on a variety of topics.

A Powerful Client/Server Online Environment

Extend your workgroup environment to the outside world. Run your own graphical online service on one computer. Add multimedia presentations. Support up to 256 users on a single computer. With Worldgroup, it's easy.

Only Worldgroup, Galacticomm's premier client/server online platform, allows you to design an online system that's customized to your vision and configured to your requirements.

The freely distributable Windows client provides an exciting graphical interface and brings application-specific intelligence to your users' PCs. And your server can run on a single DOS or UNIX computer.

Animations, 24-bit graphics, hypertext links, digital audio — any look and feel you envision can easily be created for your Worldgroup interface.

A Secure, Full-Featured Platform

Offer users a rich suite of interactive applications — with e-mail, group message areas, teleconference, polls and more.

The server manages all security issues through its Locks and Keys architecture, ensuring rock-solid system integrity. Users can access your service via modem, LAN, ISDN, the Internet and X.25 networks.

For non-client users, ASCII, ANSI and RIP terminals are also supported, bringing you the widest possible audience.

A Single Internet Solution for DOS or UNIX Environment

You can become an Internet access server with the Worldgroup Internet Server for DOS or with Worldgroup for UNIX. Provide SLIP/CSLIP/PPP accounts to authorized dial-up and LAN users so they can browse the World-Wide Web.

Allow your users to exchange Internet messages with SMTP e-mail, NNTP newsgroups and POP3 mail delivery capability for cross-platform compatibility.

Promote your products and services over the Internet with a stunning multimedia Web site. Forms, imagemaps and secure Web pages are all supported on this standard HTTP 1.0-compliant Web server.

this over the Internet?!!

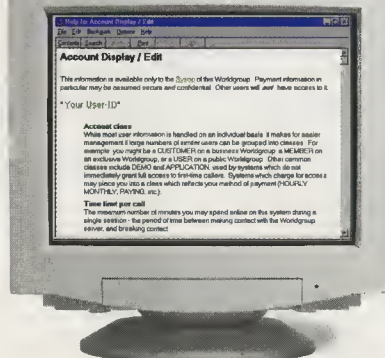
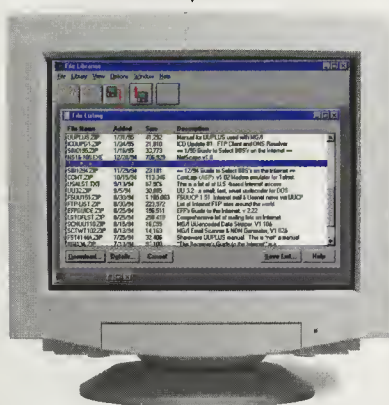
Users can chat, whisper, sketch diagrams and exchange files with each other in the multiuser teleconference.



Set up your own Web site to promote your products and services over the Internet.



Users can browse through full-screen file listings and easily download files of interest.



Online help is available at every window, with explanations on how to use Worldgroup's services.

You can even create a hypertext link for Web callers to download your client program so they can enjoy Worldgroup's fully interactive services.

A Gateway to the Internet and a Site on the Internet

Take advantage of the Internet as a global TCP/IP network for workgroup applications. Give your users access to the Internet with telnet, rlogin, ftp, finger and IRC client capabilities.

And, you can let Internet users access your system's services with telnet, rlogin, ftp and finger server support.

Visual Basic and C Extensibility

With the Worldgroup Client/Server Developer's Kit you can customize your sys-

tem to suit your needs — and even create your own add-ons — using Visual Basic on the client side and Borland C++ for the server side.

But you don't have to be a developer to benefit from Worldgroup's open architecture. You can plug and play dozens of add-on applications from Galacticom and our network of Independent Software Vendors.

Offer online shopping, voice/image teleconferencing, group schedulers, document management, fax servers, SQL databases and more.

Make the Connection to Worldgroup

You can make your service accessible via modem, LAN, serial link, TCP/IP, ISDN and

X.25 networks. Only Worldgroup gives you this flexibility.

Discover for yourself the most open, cost-effective way to provide a successful online server. For more information, call your favorite Galacticom dealer or call us direct today.

1-800-328-1128
(outside the U.S./Canada, 954-583-5990)

Or browse us at
<http://www.gcomm.com>



GALACTICOMM
Bringing your vision online

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

ISSN: 1054-2760
Volume X, Issue 2
FEBRUARY 1996

FABLE OF CONTENTS FEBRUARY 1996



- Jack Rickard —**
EDITOR'S NOTES
Season of Manger Dogs. 8
- IN MY HUMBLE OPINION**
Letters to the Editor. 10



- John Dvorak —**
DVORAK ONLINE
Microsoft, Bill Gates & The Internet. 138



- Jim Warren —**
GOVERNMENT ACCESS
Government Expands Wiretap Capabilities . . 94



- Chris Babb —**
BABB'S BOOKMARKS
Virtual Reality Browsers and Worlds 42



- Michael Erwin —**
PUBLISHING ON THE WEB
Part 13: Creating a Web BBS. 48



- Jim Thompson —**
TECHNOLOGY FRONT
Globalink, Inc., Brings Language Translation
to the Web 34



- Robert Rankin —**
"Dr Bob"
Amazon.Com—
1.4 Million Books In One Bookmark. 66



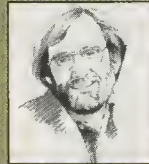
- Forrest Stroud —**
CONSUMMATE WINSOCK APPS
WebPhone; Alpha World; BlueSkies;
AccessWatch; WinPack. 82



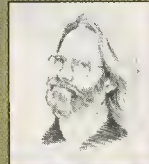
- Frank Sowa —**
CYBERWORLD MONITOR
Government Defends Against The People. . . 90



- Lance Rose —**
LEGALLY ONLINE
Vigilante "Angels" In Cyberspace 98



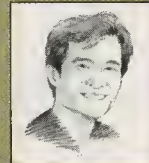
- Rea Andrew Redd —**
EDUCATION LINK
Internet Training Video; Yahoo! In Print;
Geography Resources 102



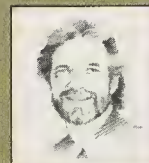
- Doug Shaker —**
BEGINNER'S LUCK
Mothra's Back on the Web 108



- Bill Gram-Reefer —**
MACINTOSH NEWS
NetCloak; WebGenesis;
Adobe's PageMill 112



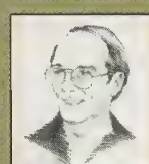
- Wallace Wang —**
NOTES FROM THE UNDERGROUND
Causing Chaos With AOHell 78



- Ric Manning —**
MANNING THE WIRES
Investment Firms Cash In On the Web . . . 120



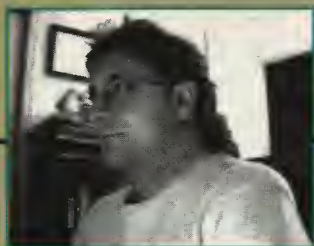
- Durant Imboden —**
MICROSOFT NETWORK NEWS
V-Chat Virtual Worlds; the "MSN Sucks" Crowd;
Blackbird 122



- David Hakala —**
DIRECT DIAL
Tulsa's Black GOLD BBS 128



- Jason Osgood —**
SPEAKING JAVANESE
What Exactly IS Java? 74



VIDEOCONFERENCING ON THE NET PAGE 54-58



ISDN INTERNET ACCESS WITH ASCEND'S PIPELINE 50 PAGE 60

FEATURES

Gadgets & Gizmology - Hayes Century Rack Mounted Modems.....	p. 38
Kevin & Kell - Appearances Really Count.....	p. 46
Win95 Communications - SAMBA Opens UNIX File Space, Printers to Win95.....	p. 52
Videoconferencing With CU-SeeMe & the QuickCam.....	p. 54
Cinecom/Direct Videoconferencing for Internet & Client/Server BBSs.....	p. 56
Ascend's Pipeline 50 ISDN Adapter - Test Drive.....	p. 60
ISP Talk - Digital Express Group Barnstorms the Beltway.....	p. 68
Russian Internet Service Providers.....	p. 70
Book Bytes - Guerrilla Marketing Online; Data Security.....	p. 86
This Is True - Bizarre and Amusing News from Around the World.....	p. 101
Big Board Briefs.....	p. 116

TELEBITS.....28

Camelot Corp. Sues Critic, PSInet Over Digiphone Driver
 Wildcat! BBS for DOS v4.12 Released
 Filmworks: Photos Developed, Digitized & Delivered Via Web
 Promote-A-Page Direct E-mail Marketing to 1 Million Internauts
 Assn. Of Shareware Professionals Gets Web Home Page
 All-In-One Internet Business Success Pack from Coriolis Group
 IBM Licenses Java, Plans to Add It to Windows
 Impotent Men's Web Site from Pharmacia & Upjohn
 Avenue Technologies' Company Profiles By E-mail
 Motorola V.34 PC Card Includes Cellular, Paging Features
 EXEC PC Builds Internet's Biggest File Collection
 Wedding & Divorce Resources Online
 Trel Internet Products Directory
 O'Reilly & Assoc's. Releases WebBoard Conferencing System
 Ascend's MAX 1800 - ISDN for Small ISPs
 Glasgow, Kentucky, Utility Company Enters Internet Business

LISTS OF THINGS

Glossary of Terms.....	p. 106
List of BBS Listkeepers.....	p. 114
WebWatch - Products & Services Guide.....	p. 124
BBS List - Chicago Area Codes.....	p. 129
The List - BBS Classified Ads.....	p. 135
Advertisers List.....	p. 142



**JEFF BEZOS
RUNS THE
BIGGEST
BOOKSTORE ON
THE WEB
PAGE 66**

**STATE OF
THE
INTERNET IN
RUSSIA
PAGE 70**



Editor/Publisher

Jack Rickard

Editor-at-Fault

David Hakala

Contributing Writers

Chris Babb	Jason Osgood
Randy Cassingham	Bob Rankin
L. Detweiler	Rea Redd
John C. Dvorak	Lance Rose
Michael Erwin	Doug Shaker
Bill Gram-Reefer	Forrest Stroud
Steve Graves	Jim Thompson
Durant Imboden	Wallace Wang
Steve Jenkins	Jim Warren
Ric Manning	Josh Zander

Graphic Design and Production

Marla Asheim

Production Manager

Jack Kramer

Subscriptions/Circulation

Patti Burnett
Cathy Rougier

Technical Operations

Gary Funk

Circulation Director

Brian Noto

Gentle Reminder

Donny Yoshida
Tony Yang

Advertising Director

Roger Mertes

Advertising Sales

Curtis Claar
Dave Fowler
Bob Holley

Editorial Offices

8500 W. Bowles Ave., Suite 210
 Littleton, CO 80123
 (303)933-8724 Editorial
 (303)933-2939 Fax
 (303)933-8881 BBS
 (800)933-6038 Subscriptions
<http://www.boardwatch.com>

World Wide Web

<http://www.boardwatch.com>

Electronic Mail

Internet:
jack.rickard@boardwatch.com
subscriptions@boardwatch.com
 FidoNet: 1:104/555

Boardwatch Magazine (Issn:1054-2760) is published monthly at an annual subscription rate of \$36. (\$99 Overseas) by Boardwatch Magazine, 8500 W. Bowles Ave., Suite 210, Littleton, CO. 80123. Second Class postage paid at Littleton, CO and at additional mailing offices. **POSTMASTER:** Send address changes to: Boardwatch Magazine, 8500 West Bowles Ave. Suite 210, Littleton, CO 80123 **Printed in USA.**

Copyright 1996 Jack Rickard
 All Rights Reserved

Cover Illustration by James Kovac

Okay, Phil . . .

IPAD Specifications

- Multiple Interface Router
Any Combination of V.35, Ethernet,
Token Ring, or RS-232, to Support
Dial-Up, Leased Lines, ISDN, and LANs
- Terminal Server w/ Full User Access Control
Fast SLIP/PPP + Compatible w/ Win 95
- Domain Name Service (Primary & Secondary)
- E-Mail Servers (SMTP and POP3)
- Integral FTP Server w/ Access Controls
- Telnet Server w/ Multiple Address Support
- Route Filtering for Firewall Construction
- Provides Internet Access to LAN Users
- Provides Gateway to External Servers
- Remote Maintenance Support
- Remote Logging Capability
- Multihost Aliasing Standard
- Simple, Non-Technical Configuration

Lease everything you need from \$225/mo.
Full dedicated T1 Internet access from \$1,000/mo.
Call (303) 699-6565 for more details or visit us online at <http://www.esoft.com>

DRAWN BY: *AW*
APPROVED: *ES*
REVISION: *B*

I'm telling them!

Memorandum

eSoft

To: Alan Bryant, Director of Marketing
From: Phil Becker, President
Re: Internet Protocol Adapter (IPAD)

Alan,

Over the past two years our engineers have taken the hardware from design to production and completed a full one year field test to prove that the IPAD really is the Internet Connectivity Appliance we set out to make. Those lucky enough to find out about the test program and get an IPAD have clearly said that it is a winner – it allowed most of them to have their Internet connection up and running in a single day! The IPAD even won the Dvorak Award for Telecommunications Excellence!

I know you're aware that we've implemented our "100% solution" program allowing us to sell a quality leased line to the Internet, the CSU/DSU to connect it, the IPAD and, if the customer wants it, even fully configured web servers with either WebSite or Netscape software to make a total Internet presence!

We've even put in place our Certified System Integrator program so we can support integrators who install systems based on IPADs, and you know that the production line is running and IPADs are available for immediate delivery!

As I remember it, you are our Director of Marketing. So how come you haven't yet told a SINGLE PERSON that they can buy IPADs NOW!?! Quit staring at that blueprint and tell them that if they call eSoft at (303) 699-6565 they will no longer be alone in the Internet Jungle. Make their life easier – tell them to call and find out about this hot stuff! I promise you they'll thank you for it.





EDITOR'S NOTES

SEASON OF MANGER DOGS

Tom Jennings, the author of Fido BBS, was a self-avowed anarchist. Not in the popular sense of rioting/burning anarchy, but rather in anarchy in its truest sense of the word - nobody up in the engine compartment running the train. Just let the damn train run. If it jumps off the tracks, nobody really catches hell. Those who want it to run some more will hop out, repair the tracks as necessary, put the train back up on them, and let 'er go some more. Otherwise - no train.

While probably a poor model in most of reality, it more or less worked online. In the early days, no one "off-line" took anything that happened "online" very seriously. How could you have a crime cast only in electrical impulses and over-excited phosphors. Fidonet, where every BBS operator more or less made their own rules, ran not so much in spite of anarchy, but in some sense because of it.

Similarly the Internet developed along the same lines. No one operating a network in any environment really had the authority to agree to submit to any outside central authority. To even conceptually interconnect two networks, you more or less had to start from the premise that each network was authoritative over its own little world and any interconnection would be "co-operative." Despite massive increases in size, scale, and scope, the Internet is still based on this concept. You rule your LAN and I'll rule mine. Our interconnection is only technical and for convenience. Even standards were not termed "standards" because that implied you had to follow them. They were posed as "Requests for Comment" and adopted almost clandestinely. We all more or less agreed to do it that way, but we NEVER agreed to AGREE to do it that way. In fact, most administrators didn't really have the necessary authority from their company or university to really "agree" with anyone not within their local province. But if someone published an RFC, and you were probably just about to do it that way anyhow, then I suppose they would be compatible more or less, if you ever needed that. And besides it worked.

I suppose it is a given today that there are tens of thousands of bulletin boards and tens of thousands of world wide web sites and several thousand Internet Service

Providers. But it wasn't always a given. At one point, it looked very much like there would be two or three online services, and if you really wanted to communicate, you had to have an account on GENIE, Prodigy, or CompuServe. There were a few bulletin boards out there, but everyone was quick to assure you that they were "hobbyists" and not to be taken seriously. And there was a bit of a network connecting some computer science labs at universities together, but of course that was a very closed world and kind of geeky. In the mid to late 1980's, it looked pretty much like CompuServe, GENIE, and the new Prodigy service more or less owned the online world. The "death" of bulletin boards was rather widely predicted then too.

The problem was that even callers were a bit anarchic. Despite the press about Prodigy's "editorial control" as a result of the Stratton Oakmont vs. Prodigy case, it was never true that they were the only one to control their online forums. CompuServe was actually quite draconian in this respect. Messages posted by members were ALWAYS reviewed by the sysop of the particular forum and if they contained any "no no's," including profanity, obscenity, and most particularly any commercial advertisement for which CompuServe was not paid, it just didn't get posted and you would receive a stern, if usually confused and illiterate warning from the forum administrator. This was routinely carried to ridiculous extremes and many callers chafed under the rule of the little gods-elect on the services.

This probably would have grown worse instead of better had it not been for a strange reversal of fortunes in favor of the smaller online services. Why this happened is anybody's guess - largely a combination of things. The e-mail island standoff was broken, we could exchange e-mail freely between services over the Internet. So you could as easily send a message to someone on CompuServe from Joe's BBS as you could from CompuServe. Actually, you could do so more easily using an entire array of off-line mail programs and other goodies developed in the shareware community. And of course you do so less expensively. BBS operators were providing essentially similar connections - at higher modem speeds, at a fraction of the cost of the commercial services. And upgrading to a higher speed modem didn't take months or years. You could do it in an afternoon - after all, there were only three modems on the system. Rather than paying \$9.95 per hour for a 2400 bps connection, you could pay \$40 per year for

a 14.4 kbps connection. I would like to even entertain myself late of an evening with the thought that Boardwatch somehow helped to foster these small systems, at the expense of the larger.

Today, we have a renewed sense of this striving between large and small. The winds of fortune have shifted again. With the growth in the Internet and development of the World Wide Web, an entire universe of offerings is available with no per-minute levies or hourly connect charges and spanning the globe geographically. Anyone can basically run a service comparable to CompuServe's for a few thousand dollars - and more importantly - they are doing so in relatively huge numbers.

At the same time, most of the people who were seriously operating bulletin boards are today offering SLIP and PPP accounts - access to the Internet. During 1995, almost every major company from IBM to Microsoft to Pacific Bell, MCI, Sprint, AT&T, all the major online services and more announced that they were in some form or another really "The Internet Company" and would be offering access to the Internet.

A few months ago I made the statement that there were probably a couple of thousand Internet Service Providers in the United States at this point. To put it mildly, the statement was challenged with some derisive prejudice. My natural reaction to accusations of madness is normally to show my work a bit and prove it. So we've done some very modest work on collecting information from Internet Service Providers from across the nation. This afternoon I'm informed we have solid responses to a fairly detailed and intrusive questionnaire from over 1400 Internet Service Providers and we're still taking them all day every day. This month, we will publish the **Boardwatch Directory of Internet Service Providers** and I rather intend to publish it quarterly until no one cares anymore. We'll put it on the newsstands at **\$6.95** and you can count them yourself if you don't believe me. I'm still quite confident there are over 2000 such providers. But we're going to publish the ones that we actually spoke to on the telephone to survey them, or received a detailed three page questionnaire back from them. We know when they went into business, how many employees they have, about how many customers they currently serve, what their prices are for various dialup services, whether or not they were running a BBS 18 months ago, and more.

This is not to say that there is no place in the universe for large online services such as CompuServe, Prodigy, or Microsoft Network. They attract large bodies of subscribers, often sport strong communities clustered around themes as diverse as pet care to professional photography. They can attract content from large publishers. And they are easy to find out about. If you haven't a clue how to get online, sit still a minute and you will see a commercial on television for CompuServe or America Online. In fact, AOL will pretty much do your kitchen floor in black plastic diskettes. By being large, they can budget considerable resources to getting the word out to the vast body politic that is NOT already on the Internet. At the end of 1995, America Online announced that they now have 4.5 million members. CompuServe too notes they now have 4 million subscribers in 100 countries worldwide.

And that is part of the point of the ISP Directory. Most of the information about the good deals in Internet access is only available on the Internet. If you are already ON the Internet, you probably don't need the information. If you are not on the Internet, you hear mostly about CompuServe and America Online as the "on ramp." In the case of America Online, I would contend you really aren't even connected to the Internet except by proxy. Many software packages for sound and video won't work at all through America Online. Hopefully, we can put sufficient copies of this ISP directory on the newsstand that anyone with a vague desire to get on the net can look up a reasonably priced local Internet Service Provider and make the connection easily.

Two items in the news have caught my eye in this respect. First, CompuServe has shut down access to some 200 newsgroups across their service at the behest of the German government. These are newsgroups of the alt.sex variety. There are currently about 2600 ALT newsgroups and probably 15,000 viable newsgroups in operation across the network. I rather view this much after the fashion of Yogi Berra - "Nobody goes there anymore - it's too crowded." Additionally, the newsgroups in question do not run to my personal tastes in reading material. Understand that they probably ARE obscene and indecent in addition to being mostly the province of morons. But the point is that CompuServe is a large online service spanning 100 countries. ONE country managed to shut down access from 100 countries to these 200 newsgroups.

The world has awakened to the Internet. And governments, corporations, and other large entities are nearly hysterical to control it. THEY want to be the "Internet Company" just like IBM, in slightly different form. As to laws, taxes, and regulations, they can pass them, but they can't enforce them. They always look for a proxy to do the enforcement for them. The income tax system in the United States would not survive an entire April afternoon if we all had to go write a check for our taxes. The government has enslaved businesses across the country to

not only do the tax collecting for them, but to subvert the employer/employee relationship as leverage.

As government greedily dips their paws into the online milieu, they are struggling with the same type of enforcement problem. It is not sufficient to declare some act of speech or assembly as an infraction of the law. If an individual breaks these laws, they must be prosecuted, and that is terribly inconvenient and expensive for government. It would be much easier to find some pressure point, some mass control lever, where they can control individuals more easily. So every online service provider becomes a target. And everyone, not just limited to governments, but everyone seeking any form of control of online behavior, wants somehow for the service provider to be the "enforcer" or deputy dawg. We are scapegoating online services in an attempt to make them responsible for acts over which they have no control. The theory is, if we do it long enough and hard enough, they will find some way to control those acts and do our dirty work for us.

Had we followed the path toward three monolithic online services, I have no doubt that no one would have ANY freedom of speech at all online already. It would have been over two years ago. But in having several thousand smaller online services, we gain some freedoms. We get choices where we can make the connection. We get price competition. And it is difficult to be "controlled" because it is difficult to control thousands of small providers.

Into this realm now rides the Regional Bell Operating Companies or RBOC. These are local telephone companies who we have tried to get involved in the online game for the past 15 years. I view them as dogs in the manger. Their preferred position is that they may not be able to eat the hay, but no one else should either. They have fought the use of the telephone network for any data application they did not control and price at 1500% of its value every step of the way going back to the late 1970's. They have sought at every turn higher rates for bulletin boards, for the use of the modem by callers, anywhere and everywhere they could. We have traveled an utterly ludicrous journey to do data at impossible rates over the least capable available medium - largely to avoid their greed and avarice. That a modem was ever developed to pass data at 28.8 kbps over analog voice lines is in and of itself testimony to a system gone awry. It was unnecessary, and horribly expensive for the entire population as we "upgraded" to new modems at each speed increase. And it was entirely due to a telephone system so myopically focused on digging quarters out of the carpet that they've entirely missed the river of hundred dollar bills blowing around near the ceiling.

And now we see that literally every local telephone company in the country is introducing "Internet Services." What they would prefer we not see is the mugging and thuggery they are purveying on local Internet Service Providers. As if by magic, the same local companies eager to install

T1's and ISDN last month are now "backlogged" and unable to do so for several months. They are seeking incredible rate increases for any service that looks useful to Internet connections and just generally harassing the hell out of anybody that looks like competition.

Douglas Bulleit, chief strategist at Bell South, was quoted as calling ISPs "interlopers, laying on the public network, getting fast packet on one side, slower dial-up on the other, and doing remarketing."

Telco executives view themselves as the natural proprietors of Internet Services and everyone else as "interlopers?" I don't know whether to be more aghast at the actual statement, or at the fact that Bell South has a "strategist." But in any event, add local telephone companies, who provide the infrastructure, to the list of potential Internet Service Providers.

My point is that small is beautiful. Germany didn't shut down my access to lurid and tasteless newsgroups, and they can't, and I'm very pleased about that. If I ever do want to become a sexual pervert I'll have instant access. The best deal consumers will get will be from a large, diverse group of Internet Service Providers that does indeed span the range from AT&T and IBM down to George Pease and PAOnline and smaller.

And I do not think small providers have anything to fear from the behemoths under legitimate and honest competition. Until this technology matures, I don't think large providers can provide the customer service and technical hand holding still required to get an Internet connection up and running. I don't think they want to deliver services at the 50 cents to a dollar an hour that seems to be emerging as the market price. The introduction of local telcos into Internet Services will be the nearest thing to a non-event that we will see in 1996.

But in the process of trying to play, they may try to maul the small providers with cheap tricks regarding the infrastructure they ARE providing. We need to be watchful of this and understand that the government would PREFER that a few large companies provide all services and eliminate the thousands of little guys so they can more easily control your life. So this may indeed be a battle. If we at all value freedom and inexpensive connections, we need a large number of small companies, not a small number of large companies. They are dogs in the manger for us, and they are whore dogs for a totalitarian state. ♦

Jack Rickard





Letters to the Editor

Boardwatch Magazine
8500 W Bowles Ave Suite 210
Littleton Co 80123

LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, *Boardwatch Magazine*, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)933-2939 or by e-mail to letters@boardwatch.com

SO, WHAT IS THE NET ANYWAY???

Jack:

Last week, I received a newsletter from a prominent collectibles auction house in New York proudly announcing that they 'Surf The Net'. The problem is, they aren't on the net at all! Rather, they are on the Microsoft Network. I guess they feel that this brings them into the global market. What a joke! The only thing it does is bring them to those out there running Windows95.

Their reasons for choosing MSN: "We chose the MSN because of Microsoft's strong position in the computer industry. Basically, we wanted to be on board with a proven winner". They go on to say "If you're wondering how to get on-line with the Microsoft Network you can simply pick up a copy of Windows 95 at your local computer store ...".

I'm not bashing Microsoft. Far from it. My point is that an organization that hopes to build sales by getting on the Internet chooses a 'private' on-line service and then touts that they are going with a proven winner. It really sounds like whomever made this decision didn't do their homework very well at all. If they had, they would have realized a few MINOR things such as Microsoft is NOT the Internet any more than Coca-Cola is the only cola beverage and that people aren't going to run out and buy Windows95 just so they can get to a particular store-front on MSN when there is even more available on the Net for FREE. And what about the considerable masses that use Mac to surf the Net? Just how are they supposed to get to MSN?

Rick Moses
ari@bigdog,fred.net

Rick:

True enough all around. The current overuse of hyperbole has confused a lot of people. But I would point out that there is a tendency, when carrying a hammer, to view all problems as nails. First, there is what we refer to as the Internet. There are also some 20,000 private internets. And then there is what John Quarterman has always referred to as "The Matrix" consisting of all online services and networks that can communicate with e-mail as the lowest common denominator. Familiarity with the nuances of the various terms is not universal or even agreed. So many are referring to any efforts at online communications as

getting on the Information Highway or Cyberspace or the Internet. There is a growing belief that if you get an account on AOL you are on the Internet. AOL not only does nothing to dispell this notion, but actively encourages it. And to some degree, it is more or less true. And I know many individuals who obtain an Internet e-mail address and proudly proclaim that they are on the Internet. I guess they are and little enough harm done.

MSN is certainly on the Internet and I think more so with time. They have amassed some 550,000 users in about four months so I view it as an impressive launch. I understand that later today Bill Gates (not THE Bill Gates but rather the operating system guy at Microsoft) is going to announce further Internet initiatives and directions for Microsoft. And for some companies and services, MSN may be the perfect host venue. That you or I would prefer to operate our own inexpensive and totally controllable site in our own home or office does not imply that this is the optimal solution for all business cases. Hammers are cool. But so are saws, drills, pliers, screwdrivers, and your odd Binford 5200 chain saw with anti-kickback feature and deluxe starter package.

Jack Rickard



EDITOR'S NOTES (NOVEMBER ISSUE)

I recently received a free issue of your magazine and was reading through the Editor's Notes section when I came upon a bit of information that really hit a nerve.

You talk of WindowsNT and Windows95 as the answer for running an InterNet server as opposed to using "\$50,000 worth of Sun hardware and software." There is another operating system that can do just as much as SunOS and is priced at absolutely free — Linux. In fact, Linux running on a 486 or Pentium that is typical for a Windows95/NT setup can be just as powerful as one of those \$50,000 setups. Personally, I have been running Linux for a year and a half and I know people that have been running it for even longer than that and I have accounts on a few InterNet providers that use Linux as their OS, and all of us are very happy with the power and stability of the system. In fact, if anyone would like to see how a Linux WWW server holds up point your browser to phantasia.pmc.grand-rapids.mi.us and take a look around.

Another point of your article that I wish to dispute is when you speak of Windows95 taking over a majority of the PC market within the next couple of years when it's been shown that Linux itself has at least doubled every quarter and is not planning on stopping anytime soon.

I would also like to make a comment about the "Internetica" article in which you speak of "several years of desperately needing a new operating system for personal computers" when it has been out there for the past few years, again this is Linux. I think it would be nice if Linux did actually get a little of the attention that it deserves.

To put it in a few words: Windows95 is not the greatest thing since sliced bread and nor is it the only choice for running an InterNet server, there is another choice that is a heck of a lot cheaper (free!), and it's Linux.

Shawn Hill
shill@nyx.cs.du.edu

Shawn:

I rather gather you LIKE Linux a LOT? Cool.

Lest our readership be misled, I would take strong exception to the premise that Linux on a Pentium is the equivalent in power and utility to \$50,000 of Sun hardware and software. There is some similar functionality but not capacity. This is an almost universal UNIX myopia. Connectivity/functionality and capacity are not the same thing. This lesson must be learned repeatedly and apparently often by the same people.

I view NT as much easier to install, operate, and learn to use than any UNIX variant. I note a lot of development activity in NT tools for the Internet. And it is relatively new and interesting. UNIX is the standard and traditional approach to this problem. It features a kind of nasty learning curve and requires a lot of attention to maintain. But if no one knew about UNIX to provide Internet Services, we might take it on. But it IS the traditional method. What's new, different, easy, powerful, etc. that might be of interest? NT comes to mind.

We actually started a regular Linux column. Two columns into it, we still didn't have the basic kernel installed from a CD-ROM, and it was the most boring thing I've ever read.

But it is free, it is quite powerful, and there is a very active community developing add-ons and utilities for it.

Jack Rickard



DEATH OF BULLETIN BOARDS

Jack,

Time to toss in my opinion on the "death" of the traditional bulletin board.

I've been running my system for almost 12 years now, on a series of hardware platforms ranging from a 64k Atari 400 to the current Pentium, with software ranging from a system I wrote myself in Atari BASIC to our current TBBS system. In that time, I've seen the average age and computer expertise of sysops drop, while the power and features of their systems rise at the same rate. Attention has shifted from modem speed to international messaging to online graphics, and now we stand with one foot solidly planted within the Internet. Geez, has it only been a decade or so since we all stared so jealously at our first advertisement for a 1200 baud modem?

BOARDWATCH has done a fine job of covering the growth of a hacker's hobby into a viable industry. Yet, like the rest of today's popular computer media, your magazine has shifted its focus from dialup systems to the Internet and the all-knowing Web. This is fine: I think we all agree that the Internet is a major online Promised Land for sysops that want to turn a profit or connect to the world. But I have no interest in providing Internet access - in fact, I feel that dialup ISP's will eventually face troubles when inexpensive ISDN Internet connections are common.

But what of the traditional BBS like mine? I mean a hobby system of 4 lines or less, perhaps with UUCP Internet mail, a few newsgroups and a Fido connection... I've never turned a profit, and never really worried about it. Being an "old-fashioned" sysop has been my hobby for so many years now that I can't even imagine turning off the Big Red Switch. Are hobby bulletin boards doomed?

My answer is a definite NO! Not as long as modems are common. As you've pointed out, the huge increase in Internet traffic has actually increased the number of calls to local systems; after you've spent hours chatting and exchanging ideas with other people around the world, it's actually a relief to connect with a local watering hole in cyberspace.

I do predict, however, that the traditional BBS run as a hobby will go the route of today's ham radio. Today's ham radio equipment isn't all that much different than it was decades ago: perhaps digital readouts have replaced dials, but the hobby itself remains unchanged. That's the direction I see for hobby bulletin boards... the number of sysops and bulletin boards will shrink, but we'll always have die-hard sysops that enjoy running a system for the sheer joy of communicating.

Note that one important phrase I used previously: "as long as modems are common". If the basic method of connecting changes from modem to cable, or God knows what, then hobby boards may indeed dry up. Personally, I don't see that happening, though. I guess I'd simply follow the technology wherever it goes, as long as it's affordable.

Here's to the future for our bulletin boards - and BOARDWATCH!

Mark L. Chambers
The Batboard TBBS (314-446-0475)
Columbia, MO
sysop@batboard.org

Mark:

I agree in most respects. There will be direct dial bulletin boards and a hobby community for a long time and in fact, I do view the Ham radio culture as very analogous. This is almost comically fitting. Most current BBS operators don't realize it, but a tremendous amount of the early PC development and the early BBS operators actually came OUT of the Ham radio community. And today, there is actually a very active group of people who operate packet-radio bulletin boards on the air.

I guess where I take exception is the implication that there is no place on the Internet for hobby bulletin boards. This is largely based on a perception of the expense of hardware, software, and connections to the Internet. If you will recall, it was pretty easy ten years ago to sink \$5000 into the setup and operation of a single line BBS with a single 1200 bps modem. Costs dropped. They will with the Internet connection as well. If you could operate a T1 type connection to your BBS for the cost of the four telephone lines you use now, you might see it differently. Actually, you can, but this will become more evident in coming months as the costs do continue to drop. So eventually, we'll have people operating what are essentially bulletin boards (web sites is the term of fashion this year) on the Internet with about the same investment as today's typical hobby direct dial BBS operator. And yes, we will still have some die-hard direct dial guys out there, as well as some packet radio BBS operators. And there are still a few Hams out there keying out CW transmissions if you can believe it.

Our focus is on the new developments and exciting advances in technology and technique. That's our job.

Jack Rickard

LETTERS PAGE

Dear Jack,

I just have to say right off the bat, I love your magazine. Keep up the good work. I enjoy reading through my copy at least three times each month when I get it in the mail. I just want to make a few suggestions to webmasters that read BoardWatch..

1) Send out by a mailing list, etc. When electronic magazines are updated electronically.

2) Drop storyboarding your pages.

I've noticed that a lot of people take their cue from professional animators, etc. And make one page of junk after junk to click through before you get to something. Whatever happened to electronic documents with anchors? I'd remembered being able to look through on seamless thing. An entirely different thing then all this other stuff.

3) Dress up your code so Text Viewers can read it.

I'm amazed at how many web sites just have code garbled out that is unreadable unless viewed with a graphical browser. Kudos goes to BoardWatch for making a nice presentation in text.

Jack, thanks for creating such a wonderful magazine. I hope it never ends.

William O'Hara
ohara@tiac.net

BTW: Os/2 rules compared to Windoze 95 :)

Mr. O'Hara:

Communicating in a multimedia world of graphics, text, video, and sound is relatively new with these tools. One maxim we observe here is that "the power to create is the power to make ugly." So I think you will see things of beauty and things most bizarre as the online population learns to design and communicate with these new tools. I find it all rather exciting, and frankly revel in the horrendous as well as the inspiring.

I think you'll see the code worsen though. The editors are beginning to become useful, and the HTML they generate is awful. We still code it by hand, and I think to some advantage in the near term. But eventually, the page design programs will win just as they did in typesetting and publishing.

Jack Rickard



JAVA, BBSS AND THE WEB...

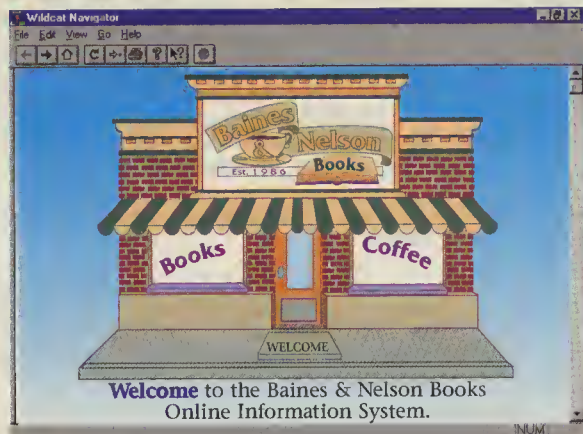
I was interested (and a bit amused) by the article touting the benefits of Java being the answer for replacing BBS functions.

I am a SYSOP for the Market Technicians Association (<http://www.teleport.com/~lensmith/mta.html>) and have transferred the BBS functions to the Internet. The Internet and its UNIX backbone offer every BBS function that you could ask for. The challenge for would-be SYSOPs is to locate a provider. Then the upgrading of hardware is done for you, T1 access is paid for by the provider and you have your own technical support team available.

For example, messages that are left on the BBS are simply replaced by e-mail. Mail to a single mailbox, for example a domain name location, can be re-sent to mailing lists with UNIX Procmail or Windows Freeware (Pegasus). These programs can bounce mail to another focal e-mail site for a user. A user need only log on to the provider of choice, anywhere, to receive messages from ALL sites of interest.

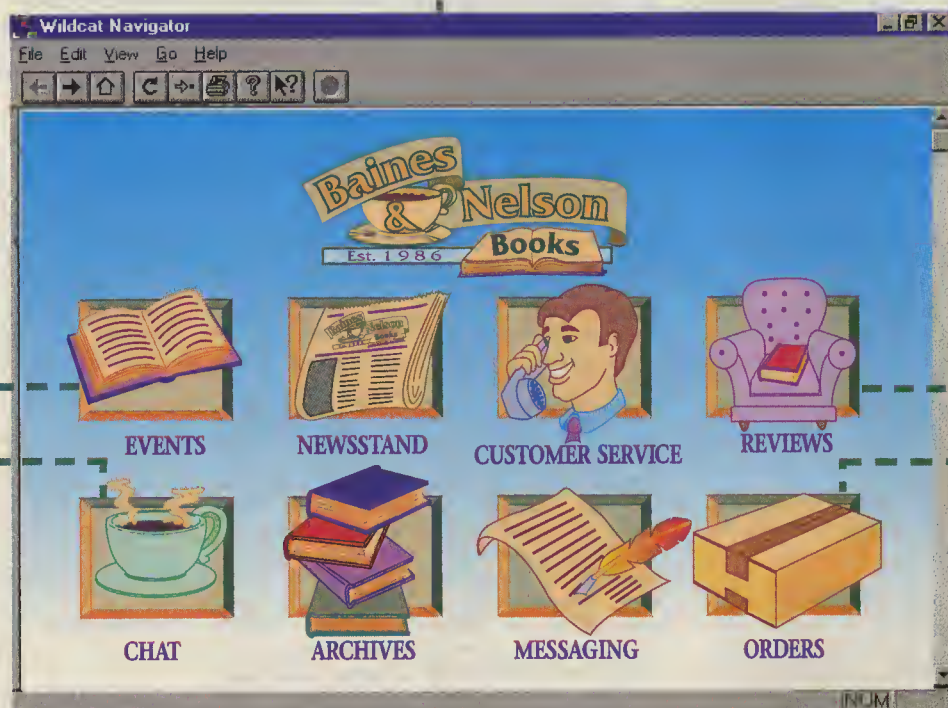
Why settle for a you can have the

**Open up to a new chapter
in online systems:
Wildcat! 5 for Windows 95/NT**



Customers can check an event schedule for book signings and other happenings using a custom system designed with wcCODE.

A moderated tele-conference system lets Baines and Nelson hold online question and answer sessions with local and celebrity authors.

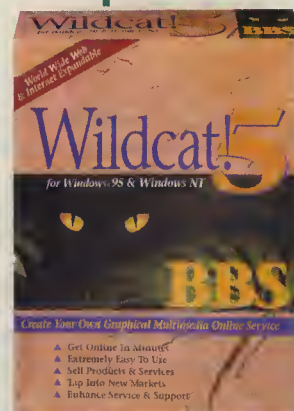


Baines & Nelson created its own book reviews and links to book publisher Web pages right from Wildcat!

Customers can check Baines & Nelson's inventory and order products using the Wildcat! ODBC add-on.

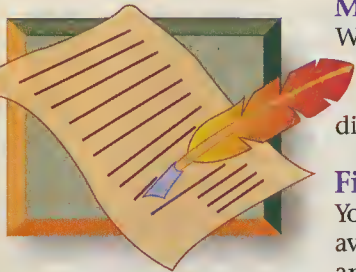
Are you considering the World Wide Web for your online needs? Consider this. A web site is great for viewing documents, but your own online service can give you more. Messaging. File management. Interactive teleconferencing. Data security. Your own online community where members want to visit and come back again and again. But where do you turn to get your own online service?

Turn to the company that's been creating online software not for 10 months or 10 weeks, but 10 years: Mustang Software. Then open up to a new chapter in online systems with the power of Wildcat! 5 for Windows 95/NT. It's a 32-bit online information system that combines the browsing ease of the Web with the powerful features of a bulletin board: the ultimate information server. Wildcat! has the power to provide an online solution for nearly any type of business wanting to get on the information superhighway. See how our fictitious bookstore, Baines & Nelson, uses Wildcat! 5 to create its online presence.



**Wildcat! gives your members access to information
through modem, LAN, WAN, and the Internet.**

few pages when whole book!



With Wildcat! Baines & Nelson's customers can send and receive e-mail quickly and easily.

Message Conferences

Wildcat!'s message conferences are similar to forums found on the larger online services like CompuServe. Each conference can have its own message base, files, bulletins, questionnaires, display screens and menus.

File Management

You can make documents, spreadsheets, databases and other files available through Wildcat!'s file management system. Searching and retrieving are as easy as pointing and clicking on an icon.

Security

Wildcat! gives you the power to define exactly which files, messages, and menu options your members can access. It's ideal for supporting different departments, offices, and even entire companies.



Search Baines & Nelson's archives with the Wildcat! file management system.

Free Wildcat! Navigator

The free Wildcat! Navigator gives your members access to services through modem, LAN and the Internet. Its point and click operation lets members browse your online service by selecting hypertext regions and icons.

World Wide Web Interface

The key to Wildcat!'s ease of navigation is its use of hypertext markup language (HTML). This is the same language used to create pages on the World Wide Web. Future versions of Wildcat! will include support for full-motion video and Virtual Reality. With the Internet Connectivity Package, members will even be able to navigate the World Wide Web through your Wildcat! system.



Using the included HTML editor, Baines & Nelson easily creates news pages and bulletins to keep their customers up to date on bookstore news.



Baines & Nelson expanded its customer service lines to include 24-hour contact via e-mail and real-time access through Wildcat!'s chat system.

Teleconference/Chat

Wildcat!'s real-time teleconferencing provides an exciting way for members to interact one-on-one or in groups. Moderated chats give members an organized forum for group discussions or question and answer sessions.

Polls/Questionnaires

One of the best ways of gathering information is through Wildcat!'s questionnaire interface. It's powerful and flexible enough to quickly gather demographic and marketing information and even process online orders.

So why settle for a few pages? With a world of connectivity and powerful options at its disposal, Wildcat! is truly the online solution for your business. To experience the Baines and Nelson Book Store for yourself, download the Wildcat! Navigator from Mustang Online. You can reach us at telnet://bbs.mustang.com, http://bbs.mustang.com, ftp://bbs.mustang.com, or through modem at 805-873-2400. If you'd like to discover how Wildcat! is creating online solutions for companies, call our Solutions Office at 1-800-807-2874 for a free consultation.

Wildcat! 5 Add-ons:

- Internet Connectivity Package
- Internet Service Provider Package
- Microsoft Exchange Gateway
- wcCODE Development Language
- Wildcat! Billing
- Bulletin Board Source Code
- ODBC Database Support
- Wildcat! Reports
- Software Developer Kit
- And Much More!



Connecting The World™

Mustang Software, Inc. • 6200 Lake Ming Road • Bakersfield, CA 93306
Voice 805-873-2500 • Fax 805-873-2599 • BBS 805-873-2400
Internet <http://www.mustang.com>

800-807-2874

© 1996 Mustang Software, Inc. All names are trademarks of their respective companies.

Bulletins are handled by Hypertext pages and even jazzed up with graphics. File transfers are easily handled by FTP.

Conferences are emulated by Newsgroups and Mailing Lists. Although Newsgroups have become a trash marketing free-for-all, a SYSOP can set up and manage Mailing List subscriptions by setting it up with the list-serve functions. Even access to hypertext pages can be managed by UNIX security. And ... if I'm a traveler, the site can be managed by Telnet from anywhere in the world. My internet provider, Teleport, provides all of the statistics for each page.

I think Java has tremendous potential, but I doubt that replacing simple BBS functions is not necessary. It would just be another interface to learn to be able to do the same thing. I suppose that telling you this, though, is just preaching to the choir...

Leonard H. Smith
lensmith@teleport.com
Market Technicians Association
<http://www.teleport.com/~lensmith/mta.html>

Leonard:

The cultural juncture between the early Internet community and the BBS community is an area of almost endless fascination for me. Never have so many known so little while discussing so much so intently.

From the perspective of a BBS operator, the Internet is incredibly rude, primitive, and non-functional in many key ways. It holds a lot of promise and most notably in connectivity and graphic interface. But your comments imply you know nothing of bulletin boards, and little of the Internet itself. The World Wide Web, for example, has fantastic connectivity and graphics interface. As a communications medium it is virtually non-functional. It follows a recurring model based on consumers "consuming" pretty screens that have been thoughtfully prepared and blessed by lawyers before being offered for sale online. So much money has been lost in this rat-hole concept over the past fifteen years it is amazing anyone would continue to invest in online services at all. Knight-Ridder lost a bundle on the Viewtron service over a decade ago. It is a persistent model among the uninitiated.

Success online has always revolved around the empowering of COMMUNITIES and interactivity. WWW is NOT in any sense interactive and supports communities in only the very crudest form. There are a number of things I think we will see added to webs so that they can, including chat, VRML, database functions, local message areas, and probably most importantly, caller management functions. Some of these require functions that are very kludgy using CGI scripts and add-on server end programs. Java allows a channel to develop software for both ends to accomplish any number of things. But the starting point for us is to at least bring a web site up to the basic requirements of a simple bulletin board system. Once that is commonly available, I think you'll see communities flourish on web sites in a way quite beyond that of direct dial bulletin boards and I share your enthusiasm for the many good

things in connectivity and graphic interface that the net brings.

Jack Rickard

◆ ◆ ◆

Jack Rickard,

I've lived on the periphery of the computer communications realm for a few years and until recently was comfortable there on the fringe using CompuServe or the like to access information, send/receive e-mail etc.

But in the last few months many changes in the "thumb" area of Michigan has necessitated my educating myself more extensively on the subject. Three -count 'em three - Internet access providers appeared almost simultaneously on the scene with local access numbers. A group called the National Public Telecomputing Network (NPTN) and the Rural Information Network (RIN) appeared with the disclosure that the local area was awarded a grant that covered the hardware for a "Freenet" site. Since I'm the editor of the local computer club's newsletter and looked upon as one of the answer men, I decided to delve more deeply into the subject of communications by reading some of the current literature so that I could at least answer some of the questions.

Enter: Boardwatch. I'll skip the justified platitudes and get to the heart of this letter, which was your response to "Brother Daniel" of the Universal Life Church. In 20 some years of reading various editor's responses to letters to the editor, I am truly impressed not only for your responses being the best and most involved (how do you find the time???) I've ever read, but by the fact that you've made "Letters To The Editor" a truly integral part of your publication and not a conciliation. Your response to Brother Daniel was outstanding and I rather suspect that you'd been just waiting for someone like him or his ilk to write. Based on your response alone to this religious predator, I've decided to get a subscription. Your response lends the sort of gutsy legitimacy to your magazine that I've only seen in very small, niche magazines that have no concern for political correctness and have a general distaste for the legal department.

Incidentally, you might consider widening the distribution of your opinions in other publications. They're priceless.

Casey Carrow
caseva@mich.com

Casey:

Thanks for the note. Actually, we ARE a small niche magazine with no concern for political correctness and a grave distaste for the legal department. But I am pleased you found Boardwatch worthwhile. I would gladly write for other publications, particularly the priceless ones, but I find the letters section of Boardwatch very time consuming. You thought enough to write, so I should think before replying.

Jack Rickard

◆ ◆ ◆

MONEY DOWN THE DRAIN, TAKE 2

Jack,

I have a few things I want to share with you and my fellow Boardwatch readers. First, speaking as a sysop and professional in the communications field, I do not share the feelings of some other sysops who lament the continuing focus on the Internet and, more significantly the World Wide Web in your fine publication.

Technology will continue to meander along, and this relatively recent fascination with the Web is just another part of the evolution. If the Web becomes the Mother-of-all-resources, well, so be it. It's not like BBSs won't be able to make the transition, as they've been able to do with other advances before it. Unlike many before me, I have never made a hobby of just running a BBS for its own merits... I was always more concerned in information delivery, and making it available to as many individuals as possible. The Internet fits the bill so easily that I am devoting more and more of my time to the Web and reaping the rewards as well. Where the BBS was lucky to get 300 new sign-ups in a month, the Web site can do several times that volume in a day. From a business perspective, it's all in the numbers.

Next, I want to alert everyone on a sure-fire way to waste your hard earned cash, whether its just out of curiosity or an attempt to quench your primal urges. I'm speaking about one of the advertisers in Boardwatch: Virtual Dreams. Looking at the ad certainly made me curious, for both personal and business reasons. OK, so I have a curiosity about these things like most of us, I'm not going to deny it. I just happened to be foolish enough to act on it, and want to share my experience with others so they can make an informed decision. There isn't any customer service department there to listen to your complaints, nor is there any money back guarantee, so here's some fair warning. In short, this little bit of entertainment is just not worth the money.

The process goes a little like this. Once obtaining the necessary application program, you run the software and need to provide your credit card information. You also need to enter the amount of time you wish to stay logged on to Virtual Dreams. Since the price is pretty steep, (a one time \$9.95 set up fee plus \$4.95 per minute) I decided to limit it to 10 minutes. Total lab fees for this experiment would run about \$60.

Once logged on, a graphic screen pops up and, lo and behold, there is a woman sitting on a bed, wearing some lingerie. Nothing to outrageous so far. It looks like you are actually looking at a real-time person on the other end, but with only a 14.4 connection, the motion was very jittery, and the resolution of the graphic was rather poor. I kept wondering if it was really someone on the other end, or just a clever hoax. My cyber-lab partner on the other end said hello, and we chatted a bit about the service, how can I get my screen to see better, and so on. From there you can ask her to do pretty much anything you like I would imagine, however my ten minutes went by rather quickly and I

INTRODUCING THE COMPLETE HIGH-SPEED SOLUTION FROM HAYES.



Hayes now gives you the complete solution for high-speed communications. Introducing the Hayes Century 8 & 16 Rack Systems. Now you can get the *proven* award-winning performance of Hayes OPTIMA 288 modems in a convenient rack system.

Hayes OPTIMA Modems Give You The Advantage!

Industry Tests and Awards

- ♦ Award-Winning 230,400 bit/s
- ♦ Flash ROM
- ♦ Dial-back and Password Security
- ♦ Caller ID**
- ♦ Remote Configuration
- ♦ Preassembled/Preconfigured/Pretested
- ♦ Voicemail and FAX-On-Demand***
- ♦ Distinctive Ring
- ♦ Hot Swappable
- ♦ Plug and Play

** Available on OPTIMA 288 Business Modem and Century only
*** Available on OPTIMA 288 Business Modem only

Clean Sweep



Independent industry testing continues to prove that Hayes OPTIMA modems are the fastest you can get*. It's no wonder Hayes OPTIMA has captured so many industry awards for technology, performance and preference.

In addition to the performance features of OPTIMA, including Flash ROM, Caller I.D. and distinctive ring, the Hayes Century 16 gives you a fully populated 19-inch rack with 16 line cards, chassis, power supply and LCD control panel. The Hayes Century 8, with its small footprint, comes fully populated with 8 line cards, chassis and power supply.

For more information on our complete ISP/Sysop product offerings, contact Hayes web site at <http://www.hayes.com> or Hayes Online BBS at 770/446-6336.

OPTIMA EVEN BEATS 33.6 MODEMS!

	Average throughput
U.S. Robotics Courier V Everything (33.6K-bps connection)	63.4
AT&T Comsphere 3825plus (33.6K-bps connection)	63.7
Hayes OPTIMA 288 w/ESP (28.8K-bps connection)	79.4

Hayes®
INCREASING THE SPEED OF BUSINESS™

HAYES ISP/SYSOP PROGRAM CURRENT OFFERS INCLUDE:

HAYES CENTURY 8-US \$1800.00, HAYES OPTIMA 288 BUSINESS MODEM-\$249.00
AND HAYES OPTIMA 288 PCMCIA-\$199.00

SAVE OVER 50%!

*Tests conducted by industry publication labs. +Reprinted from PC WEEK September 18, 1995. Copyright(c)1995 Ziff-Davis Publishing Company. Call Hayes Online: 770-446-6336, Hayes Worldwide Web Site: <http://www.hayes.com> or Telnet to "hayes.com". ©1995 Hayes Microcomputer Products, Inc., P.O. Box 105203, Atlanta, GA 30348. Hayes, the Hayes icon and the Hayes logo are registered trademarks, and Increasing the Speed of Business, OPTIMA and Century are trademarks of Hayes Microcomputer Products, Inc.

never got much further than the technical stuff. You would have to spend some serious cash before it gets even a little interesting.

To make a short story (10 minutes) even shorter, this is a service that just won't make anyone able to legally use a credit card very happy. Although I went into this with the attitude of using it as a learning experience, I still couldn't help feel I was being ripped off. If you are thinking about calling because you're the curious type, let me save you the trouble. If you are going to call to get your jolly's, forget it. There isn't anything jolly about Virtual Dreams. I'm not suggesting that Virtual Dreams doesn't provide what the ad says it will, it's just that what's available isn't much to get excited about... for business or personal reasons.

By the way, I am not going to provide you with my real name, since the last thing I need in my fairly visible position is to be labeled a pervert. If any of your readers or someone at Virtual Dreams wants to respond, feel free to do so via e-mail.

Keep up the good work,
thunnar@aol.com

Fair enough Thunnan. As I understand it, you tried the service and didn't find it valuable. You say she'll do ANYTHING I like? Proofreading?

Jack Rickard



YOUR GREAT EDITORS NOTES!

I love your mag. and I especially love your section on your Editors Notes. Ever thought of doing a supplement with only letters and your responses to them? I have learned so much more from reading the letters than some of your articles. Your articles are great anyway. The letters are just more in a conversant style and an easier read for a non-tech head like myself.

I have a bunch of questions, none of them really connected with one another. Hopefully you can help.

I have heard about Hyper G and from my readings— I have not used it yet—sounds like a real step forward over the WEB. One of the things I don't like about the WEB is the lack of a big picture of where I am. With a book, I can open it, feel it, look at the back cover, read the contents and maybe a few pages and get a big picture relationship of what the book is about. If I go to a bookstore or a Library shelf I see the books there, I see the extent of the offerings and I have an immediate relationship point. The WEB lacks this big picture reference picture and it can become frustrating. I see it as a bunch of magazines opened up on the floor scattered all over the place—somewhere on someone's floor— and I can't find what I need, other than search the pages by key word and hope for the best that what I want or looking for will miraculously appear. You see my point. Does Hyper G resolve this problem? It seems to me that the WEB could use a front end menu looking map, or cataloguing sys-

tem like the Library of Congress subject categories for books. Hypertext links in theory sound great, but all links are predefined by the HTML author and certainly do not offer necessarily the better link option. So other than using a search engine, the linking is really not a system to carry my inquiry further into a particular subject matter. It could be, If I had say varied options of links for a particular subject that I have not been predefined by the author. But the WEB does not offer this now. Any thoughts?

Another subject that I think would be great for you to cover would be using the Internet as a communication tool in distant out of the way parts of the world. Perhaps even discuss non-internet tools. Or discuss how email communication is done in non-internet countries. I work for a relief organization with offices in areas of the world truly in bad shape, like Bosnia, Angola, Rwanda and Somalia. Our challenges are always how to communicate with the field and avoid using the phone. Our questions are how to set-up radio modems and communication "servers", perhaps using CC:Mail between HQ and the field, over the internet or via dial-up connection from HQ to the site over regular POTS lines. This whole issue of communication in poor infrastructure areas is truly an important arena, and one that is challenging for folks like yourself (I think)

Anyway, keep up the good work. By the way, please tell those critics who dislike your copy layout to shove it. I like the magazine the way it is. The last thing you need is to have it look like the shlocky glossy rags out there that have nothing between the glossy pages, except my tears from dropping foolishly that \$4.50 I could've used to buy another Boardwatch.

I really love it when you get mail from people who love your mag and all the information, but then turn around and complain about the layout. Hello out there! Maybe you like it precisely because of the look in the first place?

Sincerely,

Pedro de Macedo
:pmacedo@primenet.com

Pedro:

I'm pleased you find the letters section and editor's notes useful. Boardwatch published for a number of years without a letters section and I was originally opposed to the idea. But it has proven one of the more popular sections of the magazine. I guess it rather brings to a point what our readers are interested in. In the beginning, I didn't know that most magazines don't actually reply to each letter, so we did. At this point, it seems to be the way to do it. We'll kick around the idea of a collected letters supplement.

Your comments on web alternatives and the chaos of web sites is interesting. Actually, there are many web alternatives emerging and I think we will see a lot of variations on the theme. Ward Christensen originally wrote a program titled Computer Bulletin Board System (CBBS) in assembly language

in 1978 and that is what bulletin boards were by definition. But within a few years, there were other variations on the theme and ultimately we had systems that varied from each other in form, purpose, function, and style. I think we'll see the same evolution on the World Wide Web. But it establishes a genre with a multimedia interface allowing us to incorporate graphics, sound, video, and more in an online service. And it establishes the client/server model across a wide area network. I'm seeing some very interesting things from MMB Development and their TEAMate BBS/Web product, Searchlight's WebBBS, Mustang Software's Wildcat! 5.0, Durand Communication's Mindwire, Media House's MediaHost, Excalibur, Galacticomm's WorldGroup, and many more that use the graphic interface and client/server model but extend it quite beyond what we think of as a web server. So I view the Cern HTTP server program as analogous to CBBS, and expect a lot of exciting developments in the things we can do over a distributed network.

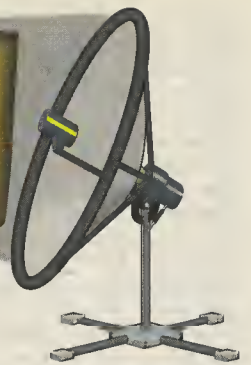
As to the index you yearn for, I guess I think we're further along than we ever have been. We had over 70,000 bulletin boards in operation with no master index or even list of all the bulletin boards. But there are some very interesting and useful indexes of web sites already in operation and between the Lycos Web Crawler and Yahoo I'm finding the process of locating things online easier than it ever has been. DEC has a new one at <http://www.altavista.digital.com> you might take a peek at. And I do confess some fascination in following one link to another from site to site. Often I start out searching for one thing, and find something quite different entirely that I would never encounter had we a more efficient index/searching system. So from my point of view, I'm not certain that we have a problem that needs fixing.

That said, I would rather expect someone to attempt a search agent that attempts a simulation of artificial intelligence. It would have access to existing search indexes and the ability to add new ones as they became available. And you would interact with them conversationally, perhaps even by voice, to define what you were seeking. It would go look for things and come back with questions to further narrow the search. I don't know that it would actually be useful, but I'm sure someone will do it to demonstrate AI concepts and capabilities. We're starting to see a resurgence in interest in artificial intelligence. It was all the rage in the mid-eighties with terribly disappointing results and became quite the thing to denigrate. But I'm seeing signs of its rebirth. It will be interesting to see if it makes a better run at it this time.

As to communications in rural areas, I think you are quite correct that the "killer application" of the Internet is not and never has been the web. It is electronic mail. And in isolated areas we are seeing all sorts of strategies revolving around the use of a bulletin board and a Unix to Unix Copy Program (UUCP) g protocol dialup connection. I myself wrote a UUPC e-mail agent for eSoft's TBBS bulletin board system. If anything, it is growing more popular in iso-



128K BPS SATELLITE DATA



In addition to our 19.2K satellite data delivery system, Planet Connect is now delivering data via satellite at 128K BPS.

This state of the art system can conserve your Internet bandwidth or almost eliminate your long distance phone costs. Both systems offer a wide variety of data but the 128K system has the bandwidth to deliver a full Usenet feed. Here are some of the features of the 128K system.

128/256K Dual Channel System:

To not be obsolete in the near future our system can be instantly switched to 256K when new bandwidth is needed in the future. Two separate independent data outputs also allow special isolated data feeds.

A FULL REAL-TIME FEED OF USENET NEWS GROUPS:

Over 18,000 different news groups including all binaries in these groups. NO EDITING OF MESSAGES. Our news feed is passed to the satellite uplink as soon as the messages are received from the Internet which provides a near real-time feed to each satellite receive site.

REMOTE ADDRESSABILITY:

No software keys or dongles required. Independent programmers are encouraged to develop specialized receive software for this system. No call-in resets required when your subscription ends. You can pay your subscription monthly, quarterly, or annually.

FORWARD ERROR CORRECTION RECEIVER SYSTEM:

Each byte is transmitted twice to allow forward error correction of the signal. This results in very few reception errors that might result in lost files.

AUTOMATIC SIGNAL TRACKING:

The system uses multiplexed satellite SCPC signals which carry a special tracking signal. This special signal allows the data receiver to track the satellite signal resulting in a low error signal when outdoor temperature extremes usually cause antenna amplifier frequency drift.

In addition to our Usenet feed Planet Connect can supply your BBS with several high quality data services. Here are some of the services that can turn your BBS into a popular on-line service.



UPI NEWS AND PICTURES

Now your BBS can offer real-time news and information from one of the best known information providers in the world. UPI reports the national news as it happens and we transfer it to you via satellite. The complete text and pictures from UPI will give your BBS an image based system that will draw in a huge audience of new users.

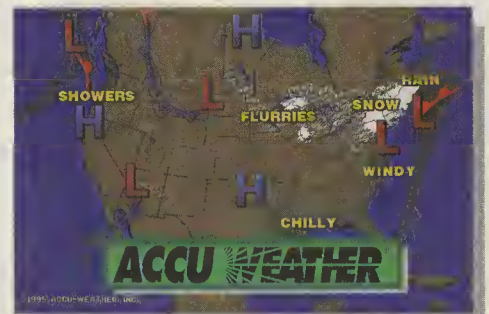
IBM 85 1/2 CBRL 22 1/8 EDS 44 5/8

STOCK MARKET AND FINANCIAL DATA

Surveys have often proven that financial data is number one on the list of data services that BBS callers are trying to find. Your BBS can now offer data from the major exchanges with hourly updates and closing prices. This service is very reasonably priced and allows a variety of display methods.

ACCU-WEATHER: THE MOST ACCURATE AND VISUAL WEATHER ANYWHERE.

Now your BBS can be the weather information provider in your community. Accu-weather is the number one provider of weather data to the major on-line services and 200 of the top TV stations. By receiving a constant series of updated weather graphics, your BBS will be used by many weather watchers.



FOR MORE DETAILS
VISIT OUR WEB SITE
WWW.PLANETC.COM



Planet Systems, Inc. 423-623-8300 voice
1065 Cosby Hwy. 423-623-8751 fax
Newport, Tennessee 37821 423-623-8111 bbs
Email info@planetc.com

lated areas. Individuals can dialup the BBS as best they can to do mail manually, by Fidonet, or even by UUCP. The BBS gathers all this mail and delivers it in one phone call to a UUCP server somewhere - often in a different country, and picks up inbound mail on the same call. The advantage is that it still works with the Internet's domain name system, and can communicate with any Internet e-mail site quite transparently. But it is often done in one or two brief telephone calls per day. The important point here is not to reinvent the wheel. You don't want a DIFFERENT and incompatible e-mail system. You just want one that is cheap to operate and can exchange mail on a very intermittent basis as lines become available. Radio modems work well with such a system.

So while we're all getting excited about T1 lines and ISDN, much of the world still uses direct dial bulletin board systems, and even the nearly ancient UUCP g protocol to communicate.

As to the layout of the magazine, we do expend some effort to improve the look and accessibility of the magazine. But at this point I'm pretty pleased with the look. It does approximately what we want it to do.

Jack Rickard



SETTING UP AN ISP WITH WEB ACCESS FOR USERS.

Dear Jack,

Both I and a friend are avid readers of Boardwatch Magazine as it comes on my subscription. He is a computer instructor at a local Adult School, and I am a student at a university. Both of us live in what is considered a very rural area of California (the central valley), and wish to be able to set up an ISP here with local-dialup and SLIP/PPP connection for people in these communities of northern Kern county. We have been closely studying the diagram of your own internet server and LAN system that was published in your June issue for this year. I realize that the Boardwatch BBS and Novell File Server that you have were original components of your system before the upgrades detailed in your article were put into effect, along with the office LAN. However, I realize, that now, Files servers and Web Sites can be combined into one, right? I am not sure about all of the intricacies of setting up such a system for 25 users, but I do know that we do possess the computer systems necessary to begin our setup process. Please note that I am not asking for any endorsements of certain products or anything of that sort, I would just like to know what it is that needs done before I get into it and screw things up royally...I understand to a point the connection of the T1 line(s) and the CSU/DSU with its subsequent connection to an IPAD or CISCO router, but wonder how many users can be on one T1 line at one time...I am aware of the costs involved in the T1 line service, etc., so that is pretty much understandable, but what I have trouble with is the connection to the IPAD or CISCO router from the Modem lines, and just how

does Telnet access figure into it all? There are only a few minor detailed questions that I can't seem to resolve from the information given in your article. Note also that we do not have a local BBS to be created into a local ISP, so we must start from scratch...but I find that Galacticomm and their Worldgroup setup seems to be a wonderful path to take. I do all in my power to seek the answers to these questions myself, but thought that either you or someone else you might know has more expertise on all of the detailed tidbits of this matter could help me get past this annoying obstacle. Thank you so much for your time and consideration of this matter.

a04141@academic.csubak.edu

a04141:

I'll take a stab at it. But the question has some problems. I really only need a car to drive about two miles to the office and two miles back. Almost every where else that I need to go for groceries, gasoline, clothes, fast food, etc. is on the way. So a Chevy Geo would do the trick. But is that REALLY all I need or want a car for? Once you have one, you tend to want it to do more than it does. In practice, I actually drive a 1994 AM General Hummer Wagon. Overkill perhaps - or perhaps not.

That said, I am very much in sympathy with your project. Many rural areas and small towns across the country wait with bated breath for Internet connectivity. And if they wait for the local telephone companies, the long distance carriers, or cable TV to bring it to them they will still be waiting twenty years from now. But in most such communities, a small operator can bring in a leased line and assemble 25, 50, or perhaps even 100 people from the community to each pay a monthly fee that together more than pays for the expenses. We're seeing it happen all across the country, and the more poorly the community is served by the large companies, the better it works.

The basic service you seek to offer is a 28.8 kbps SLIP or PPP dialup connection. The eSoft's IPAD is actually pretty ideal for this application. Basically, it sports a V.35 card that allows you to connect it to a CSU/DSU - which is basically a modem for a leased line. It can connect to a 56 kbps leased line, or to a 1.544 Mbps leased line. In practice, you can even use a 128 kbps ISDN link and we've actually connected some with a 28.8 kbps dialup connection.

The IPAD serves as a router. And it also contains a Digiboard multiport serial card. You can put up to 16 ports in a single IPAD, and you can gang multiple IPAD's together with ethernet adapters. Basically, the IPAD assigns IP numbers to each serial port. You connect the serial ports to 28.8 kbps modems quite normally with RS-232 cables, and connect the modems to a hunt group of normal analog telephone lines. Your subscribers can then dial into the modem bank and connect using either SLIP, CSLIP, or PPP. Packets are routed from the incoming T1 line to the appropriate serial port, and packets from the

serial ports are routed out the T1 line. They are on the Internet. See our article this issue on Haye's Century 16 rackmount modem.

The IPAD sports a number of other features. It acts as its own domain name server. It has SMTP and POP3 mail so you can provide electronic mail services to your subscribers. And yes, you can connect some of the serial ports to a second machine that is a BBS of any type, and those on the Internet can telnet INTO the BBS through the IPAD, and those on the BBS can telnet and ftp OUT through the IPAD to the Internet.

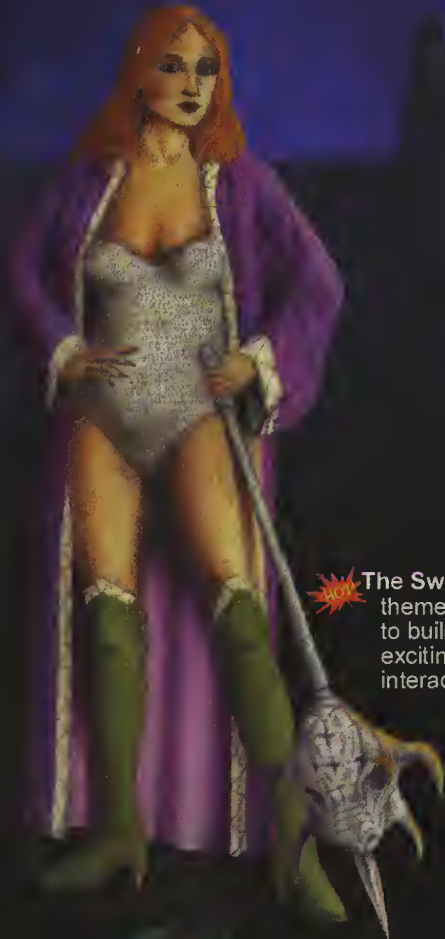
And I do recommend that in addition to the SLIP/PPP server function performed by the IPAD, that you DO also operate a BBS. New callers can dial up the BBS with any terminal program and modem, pose support questions by e-mail, discuss problems with other subscribers, and download software and configuration files you provide to help them get up and running with SLIP/PPP. You can also often use the BBS to support billing and accounting functions. In this way, with two rather ordinary PC's, you can act as an Internet Service Provider and BBS operator.

To provide a Web server, you don't actually need a Novell file server at all. Simply connect another machine to the IPAD using ethernet cards. Assign it an IP number and update your domain name service to indicate the address. We run WindowsNT on such a machine and there are several web servers that run well on it, including O'Reilly's WebSite and the Netscape Server. Actually, there is a little web server built into the IPAD, but there are advantages to using WebSite or Netscape Server on a different machine.

How many people can you accommodate on one T1 line? In theory, a T1 provides you 1.544 Mbps. A 28.8 kbps modem link can in practice take about 50 kbps of data using compression. So with 32 subscribers connected via 28.8 kbps modem, and all 32 of them sucking compressible file data continuously at the same time, you've about filled up a T1 line. In practice, most of them are sitting staring at the screen and not transmitting or receiving any packets at all the vast majority of the time. I would put 64 28.8 kbps connections on a T1 in a New York minute without batting an eye. And in practice, there are ISP's who have a T1 link in, and sell 12 or 14 T1's OUT to businesses and so forth, as well as operating a bank of dial up PPP modems. A number of people are commenting on how awful this practice, akin to cutting drugs, is. And it is true that at some point it does affect performance. But our experience is that the performance hit is usually on the local hardware at the ISP - not so much the choking T1 line. The local router is inadequate to the task of handling the twelve T1 connections to subscribers.

This goes to some poor understanding of what the Internet IS. Everyone wants a clear channel T1 directly TO the Internet. But there is no Internet to connect to in the sense they describe. There is no heart to it. You connect to somebody, who in turn connects to somebody, who may in turn be connected to the most massive T3 backbone on

SWORDS OF CHAOS



The Swords of Chaos: is an addictive game on a titanic scale. Beginning in a city the theme is "gang warfare" with fiercely protected territorial rights. The Sysop has the ability to build the game further, added rooms, items and NPC's. Up to 10,000 new and exciting areas can be added to the existing world. Sysop abilities are extensive and the interactive help system will get even the newest gamer going.

2 user-\$189 8 user-\$319 16 user-\$439 32 user-\$569 Unlimited-\$749

The Mage Connection:

Newest robust card game available! Gather your friends for a game of Magic!TM
Price \$149

Computone Expandable Multi-port Terminal Servers Built in SLIP/PPP Capabilities:

IntelliServer 2meg Slimline
IntelliServer 4meg Slimline
IntelliPort Expansion Modules 16 ports

Our Prices: **CALL!**

ASCEND PIPELINE 50 ISDN/400BRI ISDN ROUTERS:

Remote Lan Access, Telecommuting and Internet Access. When it comes to extending the corporate network to remote users, remote sites and the Internet, two rules apply. Keep it simple and inexpensive. The PIPELINE 50/400, a member of Ascend's pipeline family of remote access systems, helps network managers toe the line on both counts.

Our Prices: **CALL!**

Resellers for FARWEST BBS:

Farwest Trivia- \$150.00
Best trivia available! Teleconference features, 55,000 question database and MORE!
Tele Trivia- \$150.00
A clone of FARWEST TRIVIA- only set as a tele-game.
Questions by topic- \$39.00
32,000 questions categorized by 10 topics -WOW!
Action word add on- \$29.00
Great add on for FARWEST TRIVIA.
Farwest Trivia Suite- \$225.00
ALL the great products listed above for one great price!

WORLDGROUP
Online Interactive Software

DEPT
COMMUNICATIONS

820 S. 6th Street, Louisville, Ky. 40203
Sales: (800) 294-3044
Support: (502) 584-1807
BBS: (502) 584-1822
Telnet: bbs.adept.net
E-Mail: info@unix.adept.net
WWW: http://www.adept.net

the planet. But there is **NOTHING** on the backbone that you will ever try to reach. Your connection, in a practical sense, will be to someone who is connected to someone else, who is connected to someone else, who is ultimately connected to the same backbone somewhere somehow. So if you have a T3 connection at 45 Mbps to the Sprint backbone, 99% of those you try to connect to **AREN'T** connected via T3. And you will never get a better throughput than can pass through the narrowest part of the pipe.

The quest for more bandwidth is natural, but not terribly effective in practice. It is actually more important if you are a DESTINATION than if you are a user. If you put up the Rush Limbaugh necktie World Wide Web server, and a million people try to crawl through your pipe, the congestion will be local to you, and multiple T3's probably won't be enough.

In your situation, I would put up an IPAD with 16 serial ports and try to find a way to connect to an ISP using FRAME RELAY or some form of "fractional" T1. If you had 512 kbps or even 256 kbps link to the outside world, and 16 ports loaded, I think everyone would get all the Internet their little 28.8 kbps modems could handle. And you could probably serve 100 subscribers with that system. So take the monthly cost of the 512 kbps fractional link, divide by the 100 potential subscribers, and double it. That would be what you would charge each subscriber on a monthly basis. This should be sufficient to pay for the service and ultimately pay for the equipment and buy you a pizza once in awhile. Cyberports is an ISP operating out of San Francisco and they are specifically targeting bulletin boards and small ISPs as their service market. They can probably help you get set up with service and Bill McCaulley there was an IPAD beta test site, and maybe one of the first ones. They already have a line of fractional T1 services in various bandwidths.

Be sure and call Gary Funk here at Boardwatch when you get up. He's pulling together a database of Internet Service Providers that even we are a bit surprised at. We've located over 1400 ISPs in the United States alone and we will be publishing a printed directory of U.S. Internet Service Providers this quarter available on 39,000 newsstands across the country. Most of the ISP information thus far is available only online, and the vast majority of people who need to locate an ISP aren't on the Internet or the World Wide Web, that's why they need an ISP. We're going to put together a special book listing all we can find, along with some articles on selecting an ISP, setting up Windows 95 to connect to one, and indicating some of the tools you need to do so.

Good luck with your service.

Jack Rickard



RURAL VICTIMS

Dear Jack and David,

I recently picked up the November 95

Boardwatch in a vain attempt to find out if there are any providers out there who can provide long distance dial in at something other than the \$5.00 an hour the POTS charge.

I first went online back in the early 80's with an Apple II from an exurb of Washington, DC. I had to give that up after the first phone bill came in. I gave prodigy a try, one and a half sessions, back when they first hit the scene, and have been on Compuserve a couple of times. The only reason I'm with AOL now is that my wife and kids do in fact find things they want to do here.

I don't like AOL's rate structure, but even worse is the fact that I have to call out of state to get a decent phone company rate, and even that is much too high to allow me to explore BBS's and internet, let alone let my kids do it. The phone exchange I'm in is so rural that any calls past 10 miles cost close to 25 cents a minute, and calls to the nearest city (Springfield, MO), run more.

I contacted the local POTS and they told me it was impossible for me to get a Springfield number at my house. I contacted the POTS in Springfield and they told me it would cost \$290 something to install one, and then another \$250 or so every month! Who on earth is raking in the \$200 or so in pure profits every month off an arrangement like that?

So, maybe, I thought, maybe you guys out on the cutting edge might know someone who has got a solution for us rural victims of POTS greed. I know from poking around the Members Helping Members forum on AOL that there are a lot of us in this kind of dilemma, representing a pretty pile of nickles to someone who can help us.

Thanks for any help you might be able to give,

Brandon Smith
Synature
Mansfield, MO
Synature@aol.com

Brandon:

It really is a problem. The long distance rates that local telcos charge within their areas are obscenely higher than the long distance rates paid between states via long distance carrier. There is no reason other than that they are the only game in town and they can get it. I think we are on the verge of breaking up the local monopolies and ultimately this is how this will be cured. But in the interim, and probably for some time, rural service will remain spotty and pricey. I think you'll find that most such areas that are served well, will be served by some BBS operator who graduated to providing Internet Service on a small scale to a local area - see the letter above.

As to specific providers, we will list over 3000 in the Boardwatch Magazine Quarterly Directory of Internet Service Providers which should be available on the newsstand shortly after you read this. But as it stands now, I guess I think you will pay a bit of a premium

for Internet connectivity over your more urban peers. The Missouri Ozarks are well worth it in my unqualified, but nonetheless strongly held opinion.

Jack Rickard



EDITORIAL

Dear Jack,

I read your November '95 editorial with great interest. Since Exec-PC has entered the ISP arena we've been watching the developments in this industry closely. We've created a nice regional network, pretty much focusing on Wisconsin but we have our eyes on other areas too. I've never really minded when other smaller ISP's popped up. It just spreads the word more and advertising costs actually can go down.

The providers I've been concerned about were the regional phone companies. After all, they have many of the pieces in place already, right? Phone lines, got it. Billing, got it. Technicians, hmmm..maybe. Customer support, aha! Therein may lie the gotcha.

I would venture to say that most ISP's would tell you that the easy part is PROVIDING the Internet access. Frankly, it's often a matter of throwing money at the problem since providing the access is mostly hardware. Supporting the access and marketing it, OTOH, is the trick...and doing it efficiently is quite tricky. Good technical support people are not always easy to find. Generally, they're probably self taught since they don't teach this stuff in college yet. The good news is that they're eager to work/play on the Internet because they're going to get paid to do what they love to do best! Sounds like a good job description to me!

Since these local/regional phone companies often have gads of disposable dollars I've been concerned that they could throw money at the startup problems and become the serious competition for the smaller ISP's. They certainly can market it; what's another sheet in your phone bill?

Now you've gone on record by stating that it ain't gonna happen (at least not soon).

Although we'll continue to watch over my shoulder for those telcos, I hope you're right.

Greg Ryan President, Exec-PC
greg@execpc.com

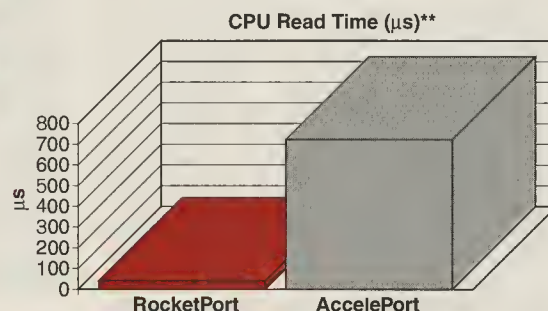
Greg:

I cannot recall a time when all of BBSland wasn't in a state of worry over the looming threat of telephone company participation in their sport. It's been hulkling over the horizon since the early '80's, and I guess I expect for it to be for some time in the future - like forever. We soon forget things like the "Gateway" rage in the late 1980's. There, the telephone companies were going to set up a single number with a single menu - perhaps just a three digit number that anyone could dial and connect to and access all the online services in

HOLD ON TIGHT! CONTROL'S ROCKETPORT RA™ GIVES YOU TWICE THE SPEED FOR HALF THE PRICE OF DIGI'S ACCELEPORT™!

Control's RocketPort RA is the industry's fastest, most reliable serial communications board for remote access. This breakthrough performance is achieved by putting eight ports and a RISC processor onto one chip. So you get **all ports sustained at 230 Kbps full duplex** at half the price of Digi!*

In the fast-paced world of V.34 modems, users demand higher performing communications boards that **avoid data loss**. RocketPort RA uses larger FIFOs to provide faster read times, increase throughput, streamline host utilization and ensure data integrity.



Unlike other boards, RocketPort RA is I/O mapped, so conflicts in configuring Digi's shared memory are a thing of the past. And it doesn't take a rocket scientist to install.

RocketPort improved reliability without compromising performance. Our fully integrated, powerful ASIC technology **uses 80% fewer components** to yield unmatched standards for reliability.

Our 30-day trial and 5-year warranty are supported by accessible, expert technical people and 24-hour BBS access.

See for yourself, call 1-800-GO-ROCKET
or e-mail at INFO@CONTROL.COM.
Ask for our Performance Benchmarks
study and a list of distributors.

ROCKETPORT™

MultiPort Serial Boards

CONTROL 
Powerful Choices

2675 Patton Road • St. Paul • Minnesota • 55113 • Telephone: (800) 926-6876 • (612) 631-7654 • FAX (612) 631-8117 • BBS (612) 631-8310 • E-Mail INFO@CONTROL.COM • Control Europe Ltd., The Courtyard Studio, Grange Farm, Station Road, Launton, Bicester, Oxfordshire, OX6 OEE, England, TEL 44(0)869 323220 Fax 44(0)869 323211 • Control Australia Ltd. Level 5, 781 Pacific Highway, P.O. Box 542, Chatswood NSW 2067, Sydney Australia TEL 61 2 419 7177 FAX 61 2 411 2268 • ©Control Corporation, 1995.

*Based on published connect speed and retail price. All product and company names are trademarks of their respective companies.

** Measurement based on driver call times.



the area. The telcos charged upwards of **\$20,000** to get on the service as a provider. Nynex had one. Southwestern Bell had one called SourceLine in Houston that signed up over 150 providers - and nearly 1200 users in a year and a half - not as good as some Commodore 64 bulletin boards I've been on.

There are actually quite a number of factors that pretty much ban these entities from getting online. Among them:

Greed. All the gateways were proposed on a model of a fifty-cent per hour charge to access the service, with that to be shared between the telco and the service provider. At launch, they all came in at about **\$3** per hour, with all but a few pennies of it going to the telephone company. Somehow in the interim they had determined that if fifty cents was good, three dollars was better. It is an absolute maxim that to be successful with any online venture requires a certain generosity of spirit to even get to be a player. They don't have it. And they can't get it. They can't buy it. They don't even understand it or why it might be important. Until they do, they are non-players. Had the service been inexpensive to end users, it would have enjoyed use. And had they had a half dozen service providers do extremely well, it would have caused near hysteria to get onboard and be one. But to get a bigger chunk of the pie, they crapped in the pie pan and no one wanted dessert at all. You can repeat this experiment empirically anywhere online anytime you like. It always comes out the same way. Yes, local telcos will offer Internet services. But U.S. Worst just applied to increase their already obscene \$63 monthly charge for ISDN in Washington State to a stunning \$184 monthly. Competing with an entity that prices their product at approximately nine times what the market will bear sounds like my kind of business. I can gouge and still look like I'm giving it away.

Corporate Culture. There are a variety of types of people in the world. This particular industry requires a certain level of visionary entrepreneur. By that, I mean someone entrepreneurial in nature, but beyond that, willing to risk their efforts and resources on something where the payback is not exactly clear or certain. They gain a certain excitement and kick out of creating a new thing, and some of them do well financially from it largely because you can't hit breakeven exactly with any accuracy. The type of person that goes to work for a telephone company in the first place, is unlikely to be the type that can deal with an emerging industry in entrepreneurial fashion. Until this industry is vastly more mature than it is now, the culture of telephone companies that involve meetings, consensus, and group think is too slow to adapt to a field where entire business plans have to be thrown out the window on a quarterly basis. Entrepreneurs within telcos tend to leave them to do something on their own. Those attracted to the telco culture simply aren't entrepreneurial. It's an absolute filter. I recently read a quote from Bell South's strategic planner. I'll not even go into how absurd his comments were, I never got passed the fact that Bell South fancied they HAD a strategic planner.

A broadcast mentality. Telephone companies have accomplished a significant thing - universal service. And it colors all product introductions. If they add a feature and everyone wants it, it is a success. If anything less than EVERYONE wants it, it is not only a failure, but it is said to have "no market." In the real world, there are zillions of small markets and no "mass" market of any use to anyone at all from my point of view. Telephone companies routinely test products that are clearly a success to my way of thinking, mark them down as failures, and discontinue them. Until they can accurately detect what success looks like, they will have difficulty achieving it in specialized niches.

But yes, I strongly feel the most glaring stumbling block will be product support in the near term. The technology is simply insufficiently mature to be "plug and play" and the level of support you at Exec-PC must provide to NEW customers, which is most of the market today, is not realistic from a telephone company. It's very difficult for ANYONE at large scale. Netcom has probably done better at growing to 250,000 customers (a raindrop on the Internet) than anyone and many of their customers are just livid at the lack of product support, and internally the company has just been in agony trying to pull this off - even with considerable financial resources from their stock offering. It's just hard to man up a competent support staff capable of handling even a few hundred thousand users.

To provide that level of support would indicate to a telco a price of **\$80** or so monthly for a basic PPP connection. We have 1400 Internet Service Providers most of whom do it for an average flat rate price of **\$23** monthly. That's a problem. Interestingly, the one company I thought might be able to do this is Microsoft. I was terribly impressed with the immediate and thoroughly competent phone support I received on a Microsoft Word question I had. As it turns out, MCI appears to be doing the support. They do have about 11,000 PPP users signed up now and some seem pretty happy with the service. Internally, MCI seems intent on pouring gasoline on itself in preparation for the Internet rally and bonfire. Again, they COULD do this, but they won't. Over a year after introducing service, they haven't made any particular splash anywhere I can detect.

The Internet is already being built by systems such as yours Greg. There are several thousand now. I'm pretty confident there will be 5,000. It would make sense that someday it will all shake out into the big three, but we're going to have to see a lot of progress on ease of use and setup before that happens. Right now, it seems to be getting WORSE not better in this area. We're going to have dozens of client/server applications, tons of new software and new applications, and the historically ever present quest for lower rates and faster connections. And yes, at any minute the telcos COULD jump in and take it away from you. But I don't think they ever will...They have the resources, they have the technology, but they are culturally and organizationally unable.

Meanwhile, they ARE stooping to some pretty low tricks in dealing with Internet Service

Providers. Many find they can't get T1 lines installed in timely fashion, at approximately the same time the telcos are beginning to offer service. This has happened rather brutally in Canada, and has cropped up rather glaringly here in U.S. West territory as well. There will be some outcry and the telcos will slink back into their hole on this one once again. I look for them to try to boost the price of infrastructure, which they can accomplish, in an attempt to get their share of the pie. This has been the only mode that has ever worked for them. I'm hoping local loop competition foils this ploy as well.

Jack Rickard



BOARDWATCH ONLINE IDEA

Jack -

I really like the WWW version of Boardwatch ... it has been a big help on two occasions where I lost my hard copy Boardwatch and was looking for an article. One idea: since you collect email addresses as part of the registration, would it be straightforward to implement an email notification that a new issue had been placed at the Web site?

Thnaks for a great magazine,

Mark

MCVanDine@aol.com

Mark:

We'll look at it. I'm growing increasingly sensitive to junk e-mail. I used to view it as an annoyance that any attempt to regulate would cause more harm than cure. But it is just getting out of hand. Our "letters" to the editor mailbox is now inundated with press releases (send them to **press.release@boardwatch.com** if you actually want anyone to read them). But even our personal mailboxes are just littered with the grossest and most amateurish marketing hyperbole and bull crap you can imagine. So we are disinclined to automatically put anyone on any type of automatic mailing list.

We might put up a requestor list you could sign up for on the web that would issue notifications of new issues. We'll look into it.

Jack Rickard



CUSTOMER SERVICE

Dear Jack —

I have subscribed to your magazine for almost two years now, and consider it to be one of the most comprehensive, helpful and interesting journals of its type. I read other magazines which focus on the Internet and electronic communications. Most have their merits, but Boardwatch gives me more of the type of information I'm looking more, and tells me HOW to do things without making me feel like a total imbecile. You have also done a great job of adjusting your content to the market's changing interests. So, for all of that, thank you.....

Your Worldgroup Source

**FREE
OVERNIGHT
SHIPPING!***

.....
**Galacticomm's
LARGEST
Ambassador Reseller!**
.....

**WORLDGROUP
8-USER
\$339.00**

Worldgroup, (20-user)	\$699.00	Entertainment Collection	\$179.00
User Six-Pack	\$189.00	Client/Server Developer's Kit	\$269.00
X.25 Software Option**	\$659.00	Watchdog Kit	\$149.00
Internet Connectivity Option	\$799.00	Command Center - Unlimited	\$99.00
DOORWAY by TriMark Engineering	\$49.95	Yahtzee Client/Server - Unlimited	\$99.00
RIPaint	\$169.00	Sea Battle Client/Server - Unlimited	\$129.00
Fax Online	\$179.00	Quick Credit 900	\$FREE
Major Gateway/Internet	\$179.00	Boca 16-Port Serial Card W/cbls	\$349.00
Major TCP/IP	\$700.00	16 Line Stallion Intelligent Serial Kit	\$999.00
Shopping Mall	\$179.00	Galactiboard (8-port serial card)	\$439.00
Search and Retrieve	\$149.00	Galactibox (16 slot modem chassis)	\$1279.00
Dial-Out	\$149.00	OST PC XNet Card	\$999.00

Total Turnkey Internet Server Packages Available - Call for Information

*Free overnight shipping applies only to software orders with shipping destinations in the continental U.S. • **Requires PC XNet Card • Prices subject to change without notice • Sales tax (where applicable) not included • All trademarks belong to their respective companies.

When you buy from Logicom, not only will you get great prices, you'll get a full time staff of the most experienced customer support specialists in the BBS industry — *second to none!* How many others can boast about that? Since 1987, we have contributed to the development, and have become the largest reseller of GALACTICOMM products. We also have our own extensive line of add-on modules and utilities to enhance your system. To order or for more information, give us a call today.

1-800-764-4266

Outside the U.S. call (954) 726-3868
FAX: (954) 726-3748 • BBS: (954) 726-3849



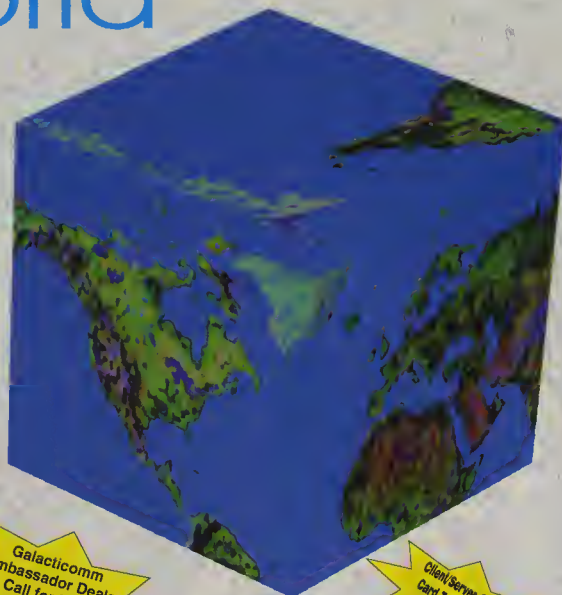
**Business
Lease**

Logicom

5701 Pine Island Road • Suite 150 • Tamarac, Florida 33321

In a SQUARE world you wouldn't need **Omni-Mall**

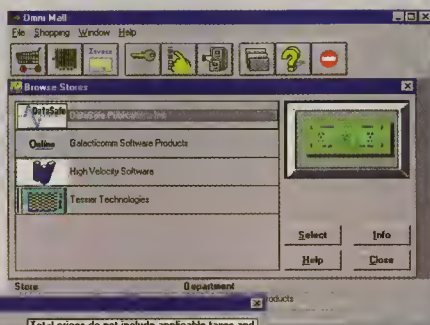
INTERFACES
WITH
POS DIAL



Galaticomm
Ambassador Dealer
Call for LOW
Galaticomm Prices

Client/Server Credit
Card Transactions
ENCRYPTED!

Call for a
Merchant
Account
Referral



WORLDGROUP™
Online Interactive Software



\$499

Omni-Mall is a complete online shopping system allowing you to sell your products online as well as offer space to other merchants. Omni-Mall supports sales of products, services, and software such as programs, database information and valuable text files. Perform automated online credit card processing by adding POS DIAL. Client/Server credit card transactions are encrypted! Existing Omni-Mall owners can upgrade to this Worldgroup version for only \$150.

800-870-0004 Orders
505-294-4980 Voice

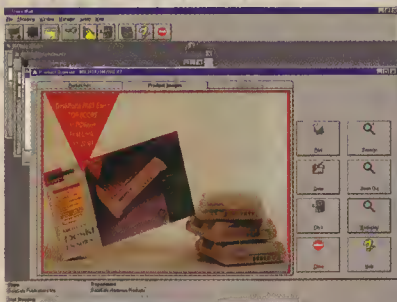
Call for a FREE
Product Catalog

505-294-1575 BBS
505-294-8225 Fax

Telnet: dsafe.com
WWW: <http://www.dsafe.com>

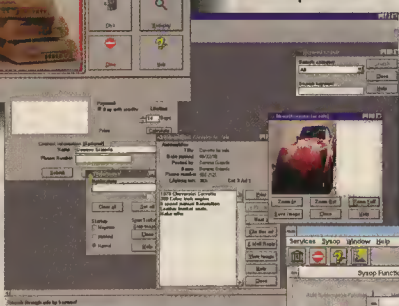


Omni-Mall™ \$499

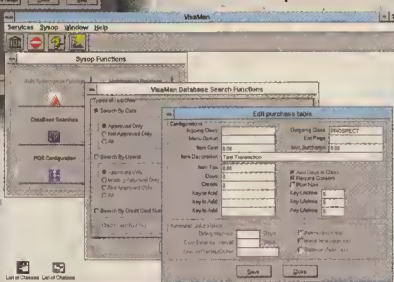


Put these modules
on YOUR
Worldgroup™ system!

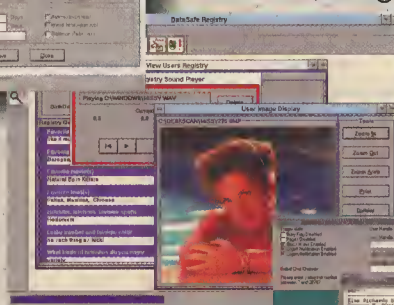
Marketplace™ \$299



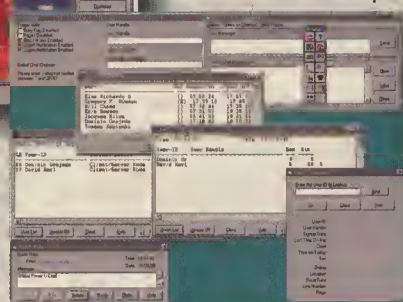
VisaMan™ \$199



Multimedia Registry \$199



Global Power™ \$99



Worldgroup™
8-user ONLY
\$339

DataSafe Products

AutoRate™	\$99
BBS Lister	\$69
Global Power™	\$99
HelpMan™	\$49
Marketplace™	\$299
Multimedia Registry	\$199
Omni-Mall™	\$299
Omni-Mall™ - Worldgroup	\$499
POS Dial Module	\$250
Major TCP/IP by Vircom	\$700
VisaMan™	\$149
VisaMan™ - Worldgroup	\$199
VisaMan™ Recurring Billing	\$100

Galacticomm Products

Worldgroup, 8-User	\$595	\$339
User Six-Pack	\$294	\$178
Dial-Out Add-on Option	\$199	\$149
Entertainment Add-on for MBBS	\$249	\$163
Entertainment Add-on Option	\$299	\$199
Fax/Online Add-on Option	\$249	\$164
Internet Connectivity Option	\$999	\$755
Major Gateway/Internet Add-on	\$249	\$164
Search and Retrieve Add-on	\$199	\$149



800-870-0004 Orders

505-294-4980 Voice

Call for a
FREE
Product Catalog

505-294-1575 BBS
505-294-8225 Fax

Telnet: dsafe.com
WWW: http://www.dsafe.com

...but that's not why I'm writing. I actually have something FAR more important to discuss, a matter of your magazine and customer service.

This morning, I called your subscription department with a problem. I told the young lady who answered the phone that, because I had received my renewal notice late, I had missed two issues. She immediately said, "No problem, I'll send them to you." She confirmed my name and address, asked which issues I had missed, and told me they would be in the mail today.

Let me say this: WOW!!!

Typical customer service at ANY organization these days goes more like this:

- 1) "Automated attendant" instead of a real person.
- 2) Your particular problem is NEVER listed on their menu.
- 3) Have to go through several levels of lengthy voice processor menus before finding a real person or the right department.
- 4) The first person you talk is never the person you need to talk to, and anyone else you talk isn't the one who can help you.
- 5) Have to explain, re-explain, and justify your complaint to someone — or a series of someones — who obviously couldn't care less, either about you or their product or their organization, and who is certain you're wrong about whatever it is you're calling about before they even answer the phone.
- 6) Get off the phone, pissed off at the world, having wasted over an hour, problem still not satisfactorily resolved.

Boardwatch, thankfully, killed the stereotype. I didn't get her name, but I wish I had, because she single-handedly restored my faith in good customer service. The phone was answered by a REAL PERSON, right off the bat, who was helpful and friendly, and who took care of my problem in no time with no aggravation. I got off the phone feeling that all was well with the world.

Missed issues on a magazine subscription, mixed in with all the other crap I'll have to deal with today, is really a fairly minor problem. But even a little problem, handled badly, can turn into a MAJOR aggravator — we've all been there. What I learned today, though, is that handled well, it can turn into a major "lift" as well.

So, many thanks to you and your subscription department, and most especially, to whoever it was that took my call today. Its good to know that good customer service is not a completely lost art.

Sincerely,

Glenn Botkin
Galaxy Scientific Corp
gbotkin@galaxyatl.com

Glenn:

Thanks for the kudos and the note. Unfortunately, it doesn't always work that way and customer service was a real problem for Boardwatch. There are a number of

points in the growth curve where no matter what kind of resources you throw at the problem, it just doesn't seem to get any better. We've struggled with this one for a year and a half and I rather take from your note that we are winning in at least selected areas. And I concur. Our subscription people are doing a super job at this point.

As a small company, we simply can't fail on this one. Increasingly in the markets of today, you either provide great customer service, or you might as well go home. You can't compete without it. We play to win, but realistically, some days are better than others.

Jack Rickard



Jack,

First, regarding your response to the gentleman from the Universal Life Church: Attaboy!

Second, regarding your excellent article on Windows 95 and Microsoft Exchange: My experiences were as positive as yours; I'm very impressed with W95, especially its networking software. There are problems, but it's a fine achievement. But there are a few rough edges on Exchange that make it still inferior to other mail clients, such as Pegasus. I have particularly in mind the lack of filters on incoming mail. If you belong to even a few mailing lists these are really indispensable, because they enable you to place mail on different topics directly into topically organized folders, and read the items in a much more pleasant way.

It's a disappointment especially because I had been hoping that the Exchange folder system would provide a unified filing system for mail, news, and many other bits of stuff. At present, I have a filing system in my mail client, one in my news client, web clips filed as files in the OS, Compuserve messages in Compuserve folders, faxes on paper somewhere, and no hope of ever finding anything. An integrated Net client would go a long way toward solving this problem, but would still only be a partial solution. After some thought, I've concluded that the right place to file stuff is in the OS, rather than every programmer trying to write his own folder/file system. Emissary is the only program I've seen that is trying to do this, and I think their effort suffers from the extreme bulkiness of Microsoft's OLE implementation. Another part of the solution would be to somehow use HTML to organize one's own filing system, perhaps superimposing it on the OS filing system. I've read that that was in fact Tim Berners-Lee's original intent when HTML was created.

Third, if you'll permit another topic: I hope you'll publish an article soon on a question I've heard posed many times, but never seen a good solution for: How can one provide E-mail service for several users on a LAN, using only a single dial up connection to an Internet provider, with a domain name. That is, if your provider supports domain names, you can get mail via Post Office Protocol for first@mydomain.com, second@mydomain.com, etc. The problem is then to redistribute that mail on the LAN,

say, under Windows, or DOS, or W95, or NT. The client systems are POP clients, but can't redistribute. SMTP does not seem geared to servicing dial up accounts. UUCP was designed to do just this, but there don't seem to be Microsoft clients, and I'm not sure how available it is anyhow (my IAP, Best.com, does not support UUCP, and I've noticed that Netcom's prices for it are high). Perhaps this is too narrow a topic for your magazine, but as I've said, I've seen many requests for help on this topic, but never a solid solution, other than "Install Unix". Too much work for me.

Thanks again,

Joseph R. Landau
jrl@versaform.com
Applied Software Technology
Campbell, CA 95008 USA

Mr. Landau:

Microsoft Exchange is very much an end user mail system and I like it so much that I am using it exclusively now. You are quite correct that it does not at all provide the power features of Pegasus. But it has something potentially better in my view. It is object oriented and extensible. These are vague terms, but refer back to our article. We discussed a small item termed Internet Idioms written by Ben Goetter. Ben is a fellow Hummer pilot but he is also a programmer. Microsoft Exchange is very open in how it interacts with Windows95 and other software. In fact, I would say this is the real strength of Windows95 - it just isn't very evident yet. You can write extensions to Microsoft Exchange fairly easily to do ANYTHING you want. But when you run them, they appear so closely linked to the program that you can't really tell they weren't there in the first place. Internet Idioms adds a signature to your every outbound message. But all the parameters for it appear on the existing configuration menus as just another tabbed page with some stuff to fill out - like your signature text and whether you want it appended to all messages or not. It looks entirely built in and operates as if it were part of the program.

It will take awhile for the word to get out first that this can be done and second how to do it. It is my understanding that Goetter is actually working on a book to be published by Microsoft Press titled Developing MAPI Applications for Microsoft Exchange. You can find out more, as well as get Goetter's Internet Idioms, at <http://www.halcyon.com/goetter/>.

Getting an Internet Service Provider to deliver mail to your subdomain should be a no-brainer. But as you point out, what to do with it once you have it may be problematical. We've covered software solutions to this precise problem numerous times in the past, but with the update in operating and mail systems over the past year, I'm unsure what the current solution of the moment is. We'll take a look and try to cover it in a future issue.

Jack Rickard

**"IF YOU WANT TO BE THE MACY'S
OF THE ONLINE WORLD, THIS
PACKAGE IS A LIKELY CANDIDATE
FOR YOUR STOREFRONT."**

Boardwatch Magazine, October, 1995 pg. 78



**MEGA
MARKET™**
The Complete Online Shopping Solution

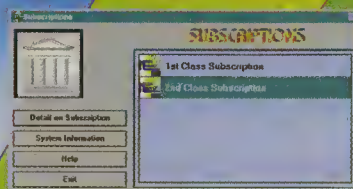
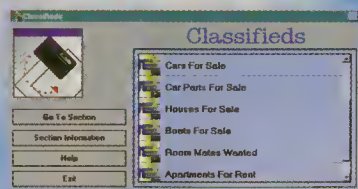
THE INCREDIBLE ONLINE MONEYMAKING MACHINE!

ACCEPT CHECKS ONLINE!

ACCEPT CREDIT CARDS!

FOR THE WORLDGROUP ONLINE SYSTEM

STORES! AUCTION! CLASSIFIEDS! SUBSCRIPTIONS! CALENDAR! PERSONALS!



THE MEGA MARKET FOR WORLDGROUP COMBINES ON-LINE SHOPPING, SUBSCRIPTION SALES, CLASSIFIED ADVERTISING & ON-LINE PERSONALS IN ONE EASY TO USE INTERFACE. MEGA MARKET IS DESIGNED TO MAKE YOU MONEY ONLINE! WITH SUPPORT BUILT IN FOR IMAGES, SOUND AND MULTIMEDIA FILE LAUNCHING, THE MEGA MARKET IS A TRUE AUDIO-VISUAL EXTRAVAGANZA!

CALL AND DOWNLOAD IT, OR RUN AN ONLINE DEMO!

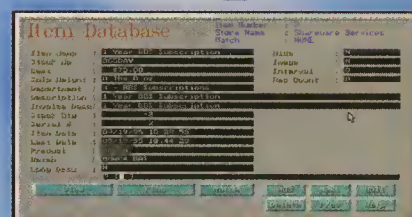
ACCEPT CHECKS ONLINE!

ACCEPT CREDIT CARDS!

FOR WILDCAT, PCBOARD, OR ANY DOOR.SYS!



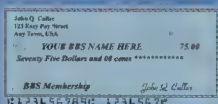
**FULL RIP SUPPORT
UPDATES USERS
RENT SPACE
HANDLES SUBSCRIPTIONS
FULL ONLINE CONFIGURATION
MULTIMEDIA SUPPORT
WORKS WITH ANY DOOR.SYS
SYSTEM!**



CALL AND DOWNLOAD IT, OR RUN AN ONLINE DEMO!

ALL ROADS LEAD TO ABS!

OTHER SOFTWARE AVAILABLE!



Online Checks Direct™ is our premier service where everybody is pre-approved! OCD allows your callers to pay you with a check online. Simple, easy, and fast, our OCD service is included with any purchase of ABS software! ABS has pioneered this service for Sysops just like you. Make the smart choice, go with the leader - ABS!



**Excalibur
Power BBS
Searchlight
WWW (WEB PAY!)
And Many More!
CALL FOR DETAILS**

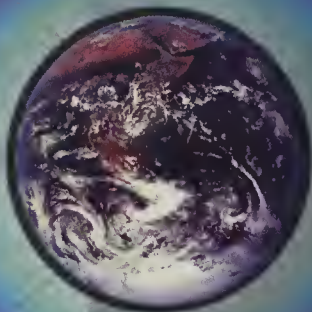


ABS Credit Card Pay™ is our service that allows you to obtain your own, legal, merchant account! Been promised that account for months? Some "other" company can't seem to get it right? Give ABS a chance to show you how a legitimate company works. WE WILL GET THAT ACCOUNT FOR YOU!

FREE ABS SETUP FOR CHECKS ONLINE!

AMERICAN BANKING SYSTEMS

PH: 407.888.9091 FH: 407.888.9092 BBS: 407.888.9093



CAMELOT CORP. SUES CRITIC, PSINET OVER DIGIPHONE DRIVER

Jeff Pulver published a rather unflattering portrait of the DigiPhone voice-on-the-Net product in his electronic newsletter last October 30 – <http://www.pulver.com/eton/report1.htm>. (Pulver's experience closely paralleled our own with the Digiphone and Third Planet Publishing, its developer; see our December issue.) Then the fun started.

According to Pulver, a Net acquaintance sent him a software driver in November, saying it was from Creative Labs and was the long-awaited ingredient that would allow full-duplex Digiphone conversations using a single Sound Blaster 16 card. Pulver, unable to get the driver to work, posted the file on his ftp site and asked his circle of Digiphone users for help; a number of people downloaded the driver.

Camelot Corp., a holding company that owns Third Planet Publishing, says Pulver published its proprietary "software code," thereby infringing copyright and misappropriating trade secrets. Danny Wettreich, president of Third Planet Publishing, would not clarify whether a source code listing or a compiled software driver was allegedly posted. Indeed, Wettreich couldn't personally say how Camelot learned that Pulver had done anything, what exactly Pulver allegedly did, how or if the software's provenance was verified. A Third Planet employee allegedly discovered the problem, but Wettreich refused to allow us an interview with said employee.

Camelot's attorney contacted Pulver the day before Thanksgiving and demanded that the software be removed from Pulver's site. Pulver complied. Apparently not satisfied, Camelot called PSInet, Pulver's ISP, within hours and demanded that Pulver's Internet connection be severed. PSInet verified that the offending file had been removed from Pulver's system and declined to cut off his connection.

The folks at Creative Labs say they have no "commercially available" driver for the Digiphone. But

employee Scott Keen pointed us to <ftp://ftp.creaf.com/hidden/fulldup.zip> – a pre-beta full-duplex driver for the Digiphone and Sound Blaster 16 developed at Creative Technologies, Creative Labs' Singapore sister company. Pulver did not retain any copies of the disputed driver, so we were unable to compare it to Creative Technologies' version.

Still picking a bare bone, Camelot has filed suit against Pulver and PSInet, seeking unspecified damages against both. Camelot also wants the identities of everyone who retrieved the software from Pulver's site. Pulver has declined to provide those names.

PHOENIX TECHNOLOGIES BUNDLES AT&T BUSINESS NETWORK

Phoenix Technologies, producer of BIOS and other system-level software for IBM-compatible PCs, will offer 300 PC manufacturers the opportunity to deliver AT&T Business Network pre-loaded on their PCs or bundled with peripheral devices. "This is an extremely efficient and effective way to get AT&T Business Network into the hands of as many customers as possible," said Michael E. Kolowich, president of AT&T New Media Services. The AT&T Business Network is a business news and information service hosted on the AT&T Interchange online service. Contact: (800)660-2299 voice or <http://www.ichange.com>

WILDCAT! BBS V4.12 FOR DOS RELEASED

Mustang Software Inc. continues to support its legion of MS-DOS BBS operators with the December release of WildCat! V4.12 for DOS. New additions include weNET, a new method of synchronizing message and file databases between WildCat! BBSs that are built into the WildCat! system. Sysops no longer need complicated scripts or third-party networking software. Message conferences can again be organized into groups, as in previous versions of the DOS BBS, allowing better organization of conferences. Control of access to CD-ROM drives was enhanced. OS/2 support has been optimized; MSI was so pleased with the

result, the company moved its MS-DOS support BBS to OS/2. "Many of our customers have expressed concern about the ongoing support of WildCat! 4 for DOS once WildCat! 5 ships," noted president Jim Harrer. "We will continue DOS development through the balance of 1995 and 1996." Subscribers to MSI's Auto-Update Plan will receive the v4.12 upgrade free of charge. Owners of v4.x systems will pay \$30 and owners of older versions will pay \$50 for the upgrade. Mustang Software Inc.: 6200 Lake Ming Road, Bakersfield CA 93306. (805)873-2500 voice; (805)873-2427 fax; <http://www.mustang.com>

PUBLISHERS DEPOT ON THE WEB

Publishers can now purchase stock photos, graphic images, sound clips, fonts and application software via the Web at a one-stop shopping center dubbed Publishers Depot. Low-resolution versions of images can be downloaded or previewed online before purchase. Prices range upwards from \$30 for a 300 Kb image. The site currently features over 350,000 items and another 150,000 are being processed. Resources are logically categorized and keyword searches facilitate locating the items you need. Categories include stock photos, works of art, illustration art, maps, backgrounds and textures, objects and body shots, fonts, directories of tools, services and talent. Picture Network International: 2000 14th Street North Ste. 600, Arlington VA 22201. (703)312-6210 voice; (702)807-2741 fax; <http://www.publishersdepot.com>

YOUR PHOTOS DEVELOPED, DELIVERED VIA INTERNET

Turnaround time for mailorder film development can be cut in half, and you can get digital images as well as paper prints of your snapshots. Seattle FilmWorks, a mailorder film developer with almost 1 million customers, will accept film by snailmail, process it and return negatives and prints via snailmail. For an extra \$3.95 per 24-exposure roll, a set of digital images can be ordered for delivery on diskette or via the company's Web site. You even get a fresh roll of film for each one developed. Seattle FilmWorks: 1260 16th Ave. West, Seattle WA 98119. (206)281-1550 voice; (206)284-5357 fax; <http://www.filmworks.com>

PROMOTE-A-PAGE MARKETING SERVICE

People who actually asked for e-mail marketing literature will receive yours

if you use Promote-A-Page. The company has compiled a database of over 1,000,000 e-mail addresses of people who have asked to be notified of products and services that suit their interests. The categorized, proprietary list allows companies to identify and contact high-probability prospects with expressed interest in a particular product, service or hobby. Contact: Promote-A-Page, (800) 932-1161 voice or <http://pub.savvy.com/promote>

ASP FINDS HOME ON THE WEB

The Association of Shareware Professionals, an international trade organization of over 1500 authors, publishers, vendors and online distributors of shareware, has created a homepage at <http://www.asp-shareware.org>. The site offers industry news; the latest shareware programs developed by members; links to other members' homepages; and resources for shareware industry professionals. Another site at <ftp://ftp.asp-shareware.org/pub/asp/> contains files included on the CD-ROM disc published each month by the organization. ASP: 545 Grover Road, Muskegon MI 49442-9427. (616)788-5131 voice; (606)788-2765 fax.

ALL-IN-ONE INTERNET BUSINESS SUCCESS PACK

It's a Web server; it's a phone; it's two books and a bunch of software. It's "everything you need to build an incredibly successful Internet business," conveniently packaged in one box for just \$59.99. It's The All-In-One Internet Business Success Pack from The Coriolis Group (ISBN 1-883577-71-3) and it represents a new standard of "bundling." This Internaut's Christmas-in-a-box includes Vince Emery's *How to Grow Your Business on the Internet* and *Web Publisher's Design Guide for Windows* by unnamed author(s). Internet phone software is included so you can cut your first deal with Taiwan without paying a long-distance bill. You also get 60 days of free rent on Internet Direct's web server using the I-Site Test Drive program (normally \$300). The box includes 50 Mb of HTML editors, ftp software, browsers and other page-creation tools, and another 50 Mb of clip art and sample media you can plug into your pages. Throw in Guerilla Marketing Online (reviewed in this month's "Book Bytes") and it's a deal. The Coriolis Group: 7339 E. Acoma Drive, Ste. 7, Scottsdale AZ 85260. (602)483-0192 voice; (602)483-0193 fax; <http://www.coriolis.com>

IBM LICENSES JAVA

IBM Corp. announced that it is licensing the Java programming language from Sun Microsystems. Java will be used in IBM's Internet browser, of course. But Big Blue also has plans to add Java capability to various operating system software, including Windows 3.1. Microsoft, developing its own competing language, has not licensed Java. So IBM will release a Java-enhanced Windows 3.1 before Microsoft does.

IMPOTENT MEN'S WEB SITE

Pharmacia & Upjohn, Inc. (one company, not two) launched a web site dedicated to raising awareness and understanding about male impotence, which affects an estimated 10 to 20 million men in the United States. The site at <http://www.impotent.com> provides facts about causes, incidence and treatments for the disease. An 8 question quiz tests one's knowledge of impotence; the answers seem to indicate that almost anything can cause "inability to achieve or sustain an erection" - medication, diabetes, injury, emotional conflict and smoking as few as two cigarettes before sex. The company, of course, sells a cure called Caverject® that "causes an erection firm enough for sexual intercourse in approximately 80% of men, regardless of cause." Just one sticking point - the drug must be injected into the penis, causing "mild to moderate" pain in one third of tested patients. Gotta want it, baby! For a free information kit including referrals to doctors who specialize in treating impotence, call (800)867-7042.

COMPANY PROFILES BY E-MAIL



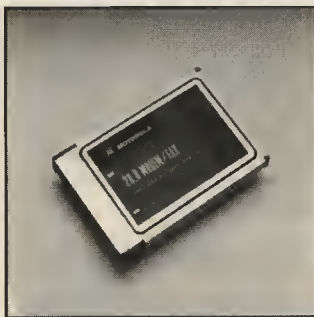
Avenue Technologies produces timely in-depth profiles of about 25,000 public and private companies, using proprietary software to sift thousands of online information sources for financial and business news information. Now you can get a custom report complete with charts and graphs via e-mail, for the modest price of \$40 per company.

Just fill out an order form at the company's <http://www.avetech.com/avenue/> web site and check your e-mail box. Turnaround time is about 12 hours. Avenue Technologies: 425 California Street, Ste. 500, San Francisco CA 94014. (800)989-4636 or (415)705-6971 voice.

ACCESS INTERNET FROM WINDOWS HELP FILES

Windows Help files can be made more useful and kept current, thanks to WinHelp Internet Access technology. Help users can jump from Windows Help to any World Wide Web site with the aid of their favorite browsers. Help users can also download files or send e-mail. Software publishers can design Help files that include links to current FAQs, technical support tips and e-mail hotlines, and patch/update files. These features are part of the WinHelp Office 95 development kit, available for \$599 during a limited introductory period (list \$1343). Blue Sky Software: 7777 Fay Ave., Ste. 201, La Jolla CA 92037. (619)459-6365 voice; (619)459-6366 fax; <http://www.blue-sky.com>

MOTOROLA V.34 PC CARD HAS CELLULAR, PAGING CONNECTIVITY

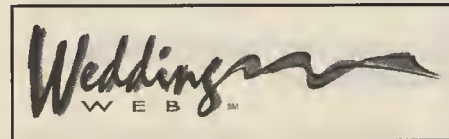


The Montana is a 28.8 data/fax modem PC Card that includes cellular connectivity and one or two-way paging capabilities. Motorola's new product supports the new Tango™ two-way pagers. Montana includes Messaging Partner™ software for paging system interface, allowing users to send wireless messages through a Tango pager to other two-way paging subscribers; print and manipulate messages downloaded from a Motorola two-way pager; send messages through the wireline modem to pagers nationwide; maintain dialing directories; and broadcast to multiple paging subscribers. Motorola PCMCIA Products Division; (708)538-5200 voice; (708)538-4495 fax.

EXEC PC'S WORLD FILE PROJECT

Don't you wish all the world's shareware and public domain files were in one place? Imagine all the hunting, dialing, telnetting and ftp time you'd save. The folks at EXEC PC are trying to satisfy this ambitious wish, and they seem to have come pretty close with The World File Project at <http://www.filepile.com>. Developed by EXEC PC founder Bob Mahoney and senior systems administrator Michael Mittelstadt, the File Pile contains over 500,000 files as of December, 1995. The collection includes EXEC PC's collection of files, plus "the largest Internet ftp and archive sites, as well as hundreds of CD-ROM based file collections." An exclusive Hyperscan feature allows searches on up to four phrases using AND or OR logic; our four-phrase AND search of the entire collection took about six seconds. Access fees are \$15 per quarter or \$50 per year, with a limit of 15 Mb of downloads per week. EXEC PC: (800)393-2721 or (414)789-4200 voice; (414)789-4500 or telnet://bbs.execpc.com BBS.

WEDDINGWEB & DIVORCE ONLINE



Learn all you need to know about both ends of the nuptial spectrum from two spectacularly different Web sites. The WeddingWeb at <http://www.weddingweb.com> covers all aspects of planning a wedding; where to get a marriage license or name change, "bright ideas" from other couples and wedding planners, how to keep track of expenses, schedules, services, who's invited and who's bringing who, seating plans and who gave what presents. Regional databases help you find vendors of flowers, photographic services, venues and so on. Visitors can leave comments with recommendations too. WeddingWeb: 3053 Fillmore St., Ste. 168, San Francisco CA 94123. (415)771-6231 voice; mailto:wedding@weddingweb.com



Then there's Divorce Online — <http://www.divorce-online.com> or mailto:information@divorce-on

line.com — which offers free legal, financial and psychological information for people who face the end of their marriages. (The odds are now over 50% that a marriage will end in divorce; 75% if one spouse has been married before.) Run by Michigan lawyer Henry S. Gornbein and social worker Dessa Stone Rosman, the site provides general advice and lists of attorneys, financial planners and therapists. Gornbein's address is 1301 West Long Lake Road Suite 355, Troy, Michigan 48098; (810)641-0100 voice. Rosman is at 111 South Woodward Avenue Suite 206, Birmingham, Michigan 48009; (810)645-2011 voice.

INTERNET PRODUCTS DIRECTORY

It's a daunting task to find the right

Trel≈

product for your Internet project. Over 500 commercially supported products for Internet users and service providers were introduced in 1995. Technology Relations, Ltd., offers a well-done product directory at <http://www.Lpac.ac.uk/Trel> that makes the job much easier. Pick a category from "analysis" to "wireless products." Read cogent one-line descriptions of specific products. Click on a product name for a detailed description. Click on the vendor's URL to get in touch. A daily updated newswire on Trel's home page keeps you abreast of new product announcements. Sponsored by the London Parallel Applications Center (LPAC) and Net Commerce Intl., The Commercial Internet Product Finder is a "permanent bookmark."

TRADERS' CONNECTION TOPS ONE MILLION ADS

The Trader's Connection is one of the oldest examples on online advertising, and one of the most successful. Today it handles over 90,000 dial-up calls per month from users who pay \$4.95 per month for access to over 1,000,000 ads for everything from lawn mowers to modems. Trader's Connection can also be reached via telnet://trader.com and through a nationwide Public Data Network at no extra cost. The company also sells unlimited Internet access services including command-line telnet, ftp and mail, plus SLIP/PPP service, for an additional \$3.95 per month. You must pay the BBS access

Voyage into Cyberspace

with a

netbook™

"A wide and devoted readership."

—*The Wall Street Journal*

"For anyone interested in the recreational uses of personal computers..."

—*The New York Times*

"The liveliest, most readable online guide yet!"

—*USA Today*

Computer books for the fun of it.



Net Guide introduces you to the exciting new world of Cyberspace. *Net Games* directs you to the incredible games people play there. *Net Chat* reveals the secret places where millions of people talk, debate, hang out, and meet. *Net Money* leads you to the thousands of sites in Cyberspace that are revolutionizing the way we manage our personal finances. *Net Trek* helps you plot your journey to the furthest reaches of the sci-fi galaxy. *Net Sports* brings you to center court in Cyberspace with stats, scores, and sports talk. And *Net Tech* is your guide to the tech support, product news, and software resources available on the Info Highway.

**MICHAEL
WOLFF
& COMPANY
PUBLISHING**

Available in Bookstores Everywhere!
Visit our Web guide at <http://www.ypn.com>

**RANDOM HOUSE
ELECTRONIC PUBLISHING**

fee as well, but that's still just **\$8.90** per month for unlimited 28.8 Kbps service. Trader's Connection Inc.: (800)753-4223 or (317)322-2000 voice; (800)386-8266 data (for demo); <http://www.trader.com>

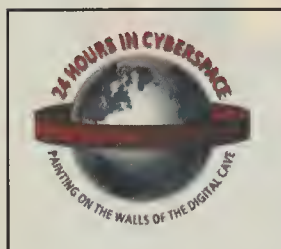
WEBBOARD CONFERENCE SYSTEM FROM O'REILLY

O'Reilly & Associates has released WebBoard, an advanced threaded web site conferencing system, in February. The \$249 application provides username/password security, an unlimited number of conferences which can be public, private, read-only or moderated. Other BBS-style amenities include top 10 lists, caller logs and bulletins. O'Reilly & Associates: 103 Morris Street, Ste. A, Sebastopol CA 95472. (800)998-9938 or (707)829-0515 voice; (707)829-0104 fax; <http://www.ora.com>

LOW-COST ISDN SWITCH FROM ASCEND

Designed for central sites, remote offices and small Internet Service Providers, the MAX 1800 remote access switch from Ascend Communications Inc. comes with digital modems to support up to 16 ports (ISDN B channels or v.34 modems) via eight BRI ports. The switch supports modems, ISDN and Frame Relay, and includes a video, LAN and WAN access switch. List prices are \$6,400 for the S/T platform or \$7,200 for the U platform. Ascend Communications Inc.: 1275 Harbor Bay Parkway, Alameda CA 94502. (510)769-6001 voice; (510)814-2300 fax; <mailto:info@ascend.com> or <http://www.ascend.com>

ONE-DAY SNAPSHOT OF CYBERSPACE FEB. 8



Against All Odds Productions, headed by Rick Smolan, has produced some epic photojournalism projects including A Day in

the Life of America, From Alice to Ocean and Passage to Vietnam. Now the team is undertaking its biggest challenge yet. In the course of a single day (February 8), 1,000 photographers – including 100 of the world's top photojournalists – will fan out around the

globe, documenting how the online revolution is changing people's lives. "24 Hours in Cyberspace" will include over 250 assignments and is expected to generate millions of images, all of which will be processed in one day. The images will be transmitted to a TeleFinder 4.0 BBS (Spider Island Software, (714)453-8095 voice or <http://www.spiderisland.com>) at project headquarters and used to create an "instant" Web site. The project will require a staff of 80 editors, designers and programmers using software specially written to handle the torrent of data. A permanent web site will be unveiled in mid-March, featuring more in-depth stories, photo essays and commentaries. Of course, a book with CD-ROM and a conventional movie are planned. (What, no video game?) Internauts are invited to submit story ideas, and submissions from photography, journalism and design students around the world will be used in the project. Against All Odds Productions: (415)331-6300 voice; (415)331-9400 fax; <http://www.cyber24.com>



LOOK, MOUSE – NO HANDS!

Programmers, writers, sheet-spreaders and others who enter character data all day don't benefit much from mouse-driven user interfaces. Looking away from one's work to find the mouse and moving fingers from keyboard to mouse and back detract from one's productivity. Graphic artists and game players get better use from mice, but they can develop carpal-tunnel syndrome from all that wrist movement. A group of doctors and engineers (always a dangerous mixture) solve these problems with the NoHands Mouse®, a point-and-click device you direct with your feet. It features two independent, floor-standing pedals, one for cursor movement and the other for clicking. Now you can keep your hands on the keyboard and your eyes on the monitor, toss a salad while Web surfing and realize 20-30 percent productivity gains, according to the vendor. List price is \$119.95.

Hunter Digital, 11999 San Vicente Blvd., Ste. 440, Los Angeles CA 90049. (310)471-5852 voice; (310)471-1669 fax.

CITY UTILITY IN CABLE, PHONE & INTERNET BUSINESS

Citizens of Glasgow, Kentucky (pop. 13,000) pay \$22 per month for unlimited 2 Mbps Internet access. Every electric utility customer automatically gets an Internet e-mail address. Citizens can choose between two cable TV services, one of which is run by the public utility. The town also offers local telephone service and advanced energy management capabilities.

How did the city get into the information services business? In 1988, Glasgow spent \$3 million to install a 120-mile looped fiber system with coaxial cable running from the fiber loop to every building. The network was originally intended to help manage demand for electricity from the Tennessee Valley Authority. But there was plenty of excess network capacity, so Glasgow went into the cable TV business too. The private cable franchisee, E. W. Scripps, offered a meager 24 channels at \$14 per month. Glasgow offered 40 channels at a lower price. Scripps countered with 48 channels at \$6 per month, a deal the city couldn't match. Instead, the city competed on customer service, even teaching new subscribers how to program their VCRs (a task that 70% of VCR owners report they cannot do).

Today, the city owns 58% of the cable TV market, and prices have dropped by almost 80% per channel. The city began offering POTS (Plain Old Telephone Service) in 1991. The city's LAN connected all the schools. Students and parents requested and got access to the school network from home PCs, and a ubiquitous community network was born. The next logical step was to connect the city LAN to the world. MCI provided a T1 link to the Internet backbone.

Bill Ray, manager of the city utility, says it all just sorta happened. "We were not imbued with special vision and we didn't invent one thing. It all came out of catalogs and off UPS trucks. This stuff is not as complicated as many make out." The city offers a \$50 document describing its community network's evolution and capabilities: Glasgow Electric Plant Board, 100 Mallory Dr., PO Box 1809, Glasgow, KY 42141. [Mailto:0007057764@mci.mail.com](mailto:0007057764@mci.mail.com) ♦

APDI – The Nation's Largest Service Bureau

With over 500 simultaneous connect lines (and growing fast!) APDI is the nation's premier Service Bureau providing customized on-line systems for corporate and professional organizations nationwide.

APDI will work with you to design your on-line system and then implement and operate it at our state-of-the-art Service Center located just outside of Washington, D.C. We provide all hardware, software and communication facilities required to make your system a success. We also provide a professional Help Desk to assist your users in connecting. You are free to concentrate on the data, APDI takes care of all technical details!

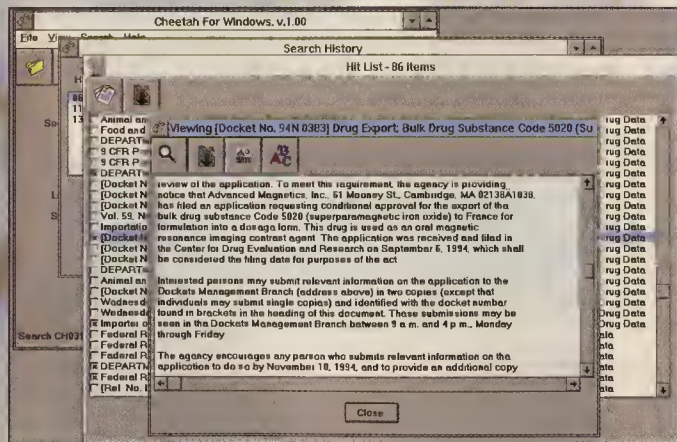
Your Choices

APDI offers you a wide range of options for your on-line system including:

- **User Interface:** MS Windows Client, RIP, ANSI, Terminal
- **Connect Method:** Toll Call, 800 Number, Local Call Nationwide, ISDN
- **Internet Access:** Telnet, World Wide Web, E-Mail
- **System Design:** Customized to present your unique image

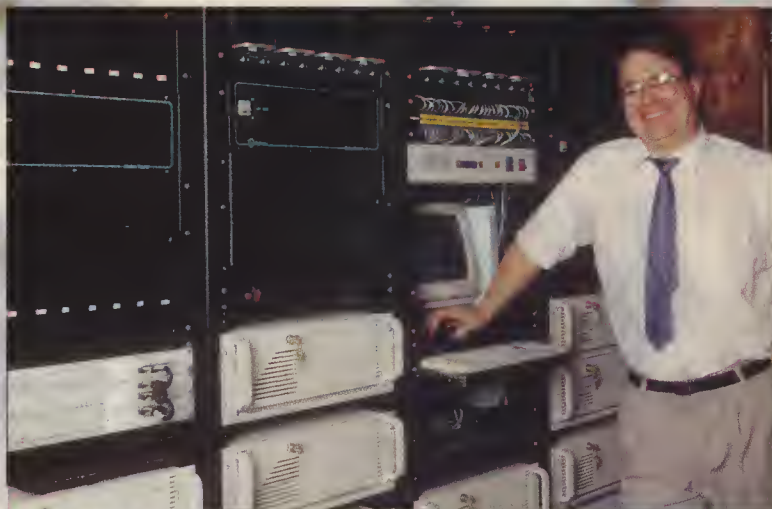
On-Line Applications

APDI has implemented systems for some of the nation's largest organizations. We have developed service bureau applications for **publishing, associations, university courses, customer support, software distribution, CD-ROM order processing**, and more! If your project doesn't fit a standard application, we can develop a custom on-line system to fit your needs.



Screen shot from APDI's new Cheetah for Worldgroup Product

APDI's Cheetah product is the on-line industry's fastest and most powerful full text search and retrieval program. Search one or multiple databases using Boolean and proximity search phrases. Megabytes of data can be searched in fractions of seconds. You can take advantage of Cheetah on your system running at APDI's Service Center or you can buy the package to run on your in-house system. Cheetah is compatible with virtually all popular BBS programs including a new version for Galaticomm's Worldgroup!



President Mark Burnett in one of APDI's Computer Rooms

What Makes APDI Number One?

Our State-of-the-Art Service Center and Secure Environment

- USRobotics 33.6Kbps modems on all phone lines
- ISDN, Packet Switching, Frame Relay
- Fully redundant hardware systems
- Independent backup power facility
- Automated data backups daily
- Complete virus scanning
- 7 by 24 system monitoring
- Continuous technology refreshment

Our User Support

- Professionally staffed Help Desk for your users from 9 a.m. to 12 midnight EST

Our Customers and Alliances

Some of the largest and most progressive corporations, associations and even major online services have selected APDI to implement and operate on-line systems for them. Additionally, many manufacturers and service providers have chosen APDI as a business partner. Among these are:

- Galaticomm, Inc. • Mustang Software, Inc. • CompuServe Network Systems

Our Reputation and Demand for Excellence

...having worked with APDI in setting up the PTO's on-line information system we continue to be impressed with their high quality of service and professionalism.

Jim Moriarty, United States Patent and Trademark Office

...we are very impressed with APDI's excellent support and operation of mission critical Worldgroup based on-line systems.

Scott Brinker, President, Galaticomm, Inc.

...CompuServe is excited about the benefits that APDI can bring to our existing and future client base.

Jeff Kiely, CompuServe Network Systems



APDI™

Application Programming & Development, Inc.
6805 Coolridge Drive, Camp Springs, MD 20748

Ph: 1-800-785-APDI Fax: 301-449-1224 INFO@APDI.NET
Worldgroup BBS: 301-449-1835 APDI Wildcat BBS: 301-449-6100



Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: 72777,2677, MCI Mail: 321-4127, mailto: jim.thompson@wnsnews.com

TECHNOLOGY FRONT by Jim Thompson Western News Service

GLOBALINK, INC, BRINGS LANGUAGE TRANSLATION TO THE WEB

You're on the Internet and you stumble onto your fantasy home page. Hey, we're talking revealing photos of French babes (or maybe Latin hunks, depending on your preference!). It's all here: names, vital statistics, even intimate details about their secret sex lives and turn-ons. The only trouble is everything is in French! Unfortunately, your knowledge of the language is limited to a few dirty words you learned while in high school and a couple of phrases memorized from the latest edition of "Wicked French." As Carl Malden used to say, "What will you do? What *will* you do?"

Currently, about your only choices are to sweat over each word with a copy of a French-English dictionary or to resign yourself to the realization that you will never know what Brigitte, Francois or Pierre like to eat "the morning after."

But soon, thanks to a company called **Globalink, Inc.**, a new choice will be available. One that will not only allow you to get the intimate details of your dream date's life, but to get that information on-the-fly.

NETSCAPE TRANSLATOR

Globalink, Inc., which has been making language translation software since 1990, will soon integrate their translation technology into Netscape Navigator 2.0. This is being done in connection with Netscape's Development Partners Program. The alliance will allow for the translation of French, German, Italian and Spanish to/from English while online.

"The ability to obtain a document from the Internet in a foreign language and get a digested translation, offers incredible possibilities for global communications," said Jim Lewis, President of Globalink, Inc.

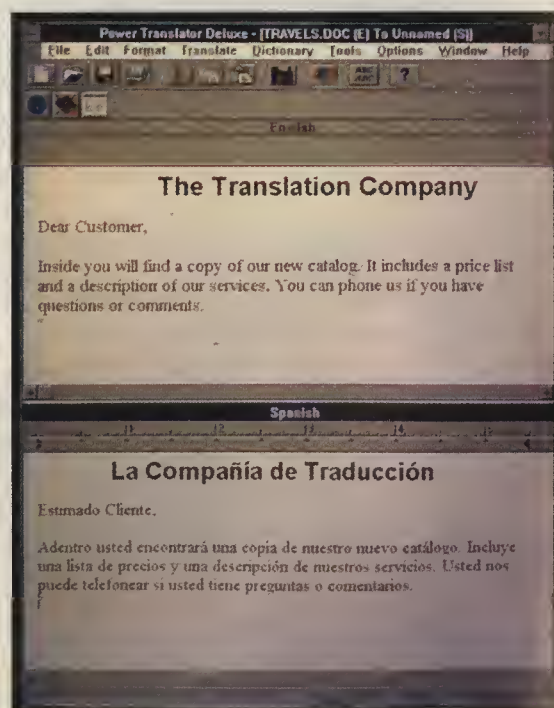
The Netscape translation package will be available to those who purchase Globalink's **Telegraph** which is scheduled for release in the first quarter of 1996. The package will incorporate Globalink's "next generation of translation" technology called "Barcelona." This translation engine can be installed and run

under the Netscape 2.0 browser. "A user who is surfing the Net can click on an icon while they are viewing an HTML page. The engine will strip the graphics from the data, translate the text and then reassemble the page. All of this happens immediately," notes Lewis.

According to Globalink, "Users wanting to translate Internet information while viewing it through



Netscape's software will simply access the translation feature and obtain a draft translation, suitable for comprehension of the source text, without ever disrupting their online search."



Plug-In Translation for Netscape 2.0

SPEED MAY VARY

The translator is a processor-intensive application which means that the actual speed of the translation is dependent upon the type of processor as well as the complexity of the document. "Generally, it takes a minute or so per page, which is a full-page with single spaced text or about 2,000 words. Typically, an HTML page does not have much text, so we expect a very rapid turnaround on most translations of this type. Probably 15 or 20 seconds for the page," said Lewis.

According to a spokesman, the "Barcelona" translation technology represents a significant step forward in the world of language translation. In the past, most translation programs were written by a linguist-turned computer scientist or computer scientist-turned-linguist. This meant that there were very few people who understood both disciplines and who could create a program for translation. It also meant that the technology was unable to grow at any significant rate. Globalink, Inc. took a different approach. They created a high level language that can be used by a linguist who knows very little about computer programming. "The result is almost the dBase database engine for machine translation, allowing customers to modify the product. That root engine, called Barcelona, is the core of our new products," said Lewis.

SERVER APPLICATION

The actual Barcelona engine is a server application that runs under Windows95 and/or Windows NT. The application needs a client program to actually run. This client can be Microsoft Word, WordPerfect or Netscape Navigator 2.0. Globalink will market the Barcelona server with their own client application. These two programs (the Barcelona server and the client application) will be sold under the name of "Telegraph." This package will allow you to change the grammar rules, build dictionaries, edit and import documents for translation.

To run Telegraph you will need a computer capable of running Windows95 or Windows NT. This means at least a 486 class computer with 16-MB or more of RAM. Each language includes a full dictionary which requires approximately 8 to 10-MB of disk space.

Globalink, Inc. is also planning to offer a one-year maintenance period to anyone who purchases Telegraph. "This is common in the mainframe business but not in the PC world. Under this program, we will provide our customers with one or two updates to the program and the language dictionaries during the first year and then they can decide if they want a subscription for regular updates after that. The whole idea here is that we can rapidly improve the quality of the translation and subject dictionaries while the user can continue to update the rules set," said Lewis.

MIXED RESULTS

When this was written in December, 1995, Globalink, Inc. was offering free translations for documents up to 300 words using their machine based Barcelona technology. Translation services were available from English to/from Spanish, French and German.

The actual quality of this translation seemed dependent on the original document. I tried several tests with mixed results. The first problem I encountered was getting to Globalink's Web page. However, in fairness, this could very well have been a problem with the Net itself and not with their Web page or site.

There are so many factors that come into play when operating on the Internet that it is difficult, if not impossible, to determine exactly where a slow-down or blockage is occurring.

After trying for several days, I finally decided to send my document via e-mail. This turned out to be a much better delivery system. It was about 4 hours before the translated copy was sent back to me via e-mail. Not a fast turn-around, but this was a free service designed to provide a look at the technology. As far as I was concerned, this was fast enough for evaluation purposes.

The actual translation of this first document was another matter, however. I had a news story about auto racing translated from English to German. The translation I received was barely understandable. Without the original, it would have been almost impossible to understand what was being communicated. Some of the translation was even funny. For example, in the sentence, "Al Unser Jr. drove for Marlboro Team Penske," Barcelona translated the word "drove" as "Herde" which actually means "herd" but could also mean "drove" as in a drove of cattle but not as in the past tense of "drive."

I decided that perhaps the document was a bit too complex and, consequently, not a good candidate for machine translation. I tried again; this time I sent in a biography with simple words and sentence structure. This time, the translation was not bad at all. It was not perfect, but it did provide a clear sense of the contents of the original document.

From my experience, machine translation can do a reasonable job providing the sentences and ideas expressed in the original document are not too complex. It appears that in machine translation, the computer is looking for a sentence structure with the main parts of speech (verb, subject, etc.) within certain locations. Sentences that contain clauses or that do not strictly adhere to the rules of grammar, may result in translations that are difficult or impossible to understand.

LIVE TRANSLATORS ONLINE

If you need a more exact translation, Globalink, Inc. offers several software translation packages along with a service called *Translate Direct* which will link you directly to a network of more than 1,000 professional translators. Because this service connects you with professional translators, it offers a much higher level of translation. You might use this service if you need "publication quality" translations. Documents can be submitted via Globalink's World Wide Web page, via fax or e-mail.

"Most agree that locating a translator on short notice, who can turn around a project promptly with good quality, is virtually impossible. In fact, the translation process has been so tedious and costly, that many businesses avoid it, suffering the consequences of missed opportunities simply because they don't speak a foreign language. Translate Direct is able to provide a fast, convenient solution, directly from any PC, taking the hassle out of translation," said Lewis.

Several levels of translation are available depending on the complexity and importance of the document. The price for the translation is based on the complexity of the document, the time to translate and the quality of the final translation. The least expensive is for a machine translation (Globalink likes to call this "Computer Assisted Translation"). Custom and publication-quality work by a professional translator is more

expensive. For a machine translation of a document via Translate Direct the cost is **\$0.04** per word. For publication quality translation the cost varies from **\$0.22** to **\$0.25** per word. Additional charges may be made for rush services.

OTHER TRANSLATION SOFTWARE

Globalink, Inc. also offers several offline translation packages. Their Power Translator line of products offer easy translations in the Windows, DOS, Macintosh and UNIX environments. Prices for the programs range from the entry level **\$50** edition to the Power Translator Professional which retails for **\$500**.



Power Translator allows you to import documents from major word processing programs including Word for Windows, WordPerfect for Windows and AmiPro or to scan documents in directly. The translator works on a sentence at a time, so each word is reviewed in the context of how it is used within the sentence. This technique provides a surprisingly accurate level of translation. Power Translator Professional translates at a speed of approximately 20,000 words per hour.

In addition to the general dictionary of over 250,000 words, Subject Dictionaries are also available. Subject Dictionaries include Automotive (Spanish & German), Aviation (Spanish & French), Legal (Spanish & German), Business/Finance (Spanish, French, German & Russian) and Computer (Spanish, French & German).

Once the document is imported into Power Translator, you can easily edit either the original or the translated text. You can also make changes and adjustments to the dictionary to ensure that it contains specific or unique words or phrases.

AUDIO READ-BACK

One unique feature is the ability to actually hear the translation. The CD-ROM version of both Power Translator Deluxe and Power Translator Professional can read your document to you through the sound card in your computer.

Of course, there is a cost, in terms of system resources, that must be paid for all of this functionality. The Windows version requires a 386 or higher CPU, 4-MB of RAM (8-MB recommended) and 37-MB of hard disk space. The DOS version requires 18-MB of hard disk space. The Macintosh version requires a MAC II series or higher and 36-MB of disk space.

CONCLUSIONS:

Even in the same language, words and ideas are often difficult to communicate. Language carries with it all the subtleties and nuisances of thousands of years of development.

Often communication is more a matter of feeling or "understanding" than a science. Because of this, a translation by a computer can often be a disappointment. The key to getting a usable translation is to understand the limits of this technology. A document with simple words and concise sentence structure will likely result in a better translation.

Globalink, Inc., has come a long way in making machine translation a viable solution to translating documents. This machine translation is not perfect, but it can be quite usable. If all you need is to get the sense of a document, then the machine translation does the trick. If you need a more accurate form of translation, you will have to massage and manipulate the machine version. However, even with this massaging, you can save a great deal of time and effort by running your document through the translator first.

The big promise here is being able to translate documents on-the-fly over the World Wide Web. Suddenly, a whole world of new information will be opened. This may not solve all the world's problems or bring about world peace, but it certainly will go a long way in opening the channels of communications and in breaking down many of the barriers that have long separated countries and cultures. Again, the accuracy of the translation will depend on the structure and complexity of the original document. ♦

CONTACT:

Globalink, Inc.
9302 Lee Highway
Fairfax, VA 22031

(703)273-5600 voice
<http://www.globalink.com>

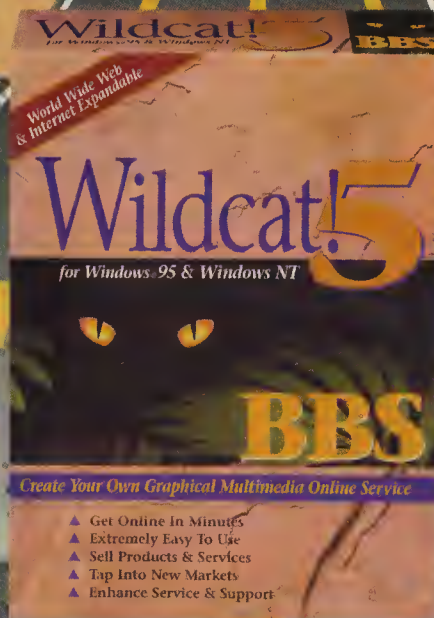
COSTS:

Telegraph:	\$895.00
Language Assistant:	\$49.00
Power Translator Deluxe:	\$129.00
Power Translator Professional:	\$399.00

The Online Solution For Your Company.

**It's the online solution
you've been waiting for.**

Wildcat! 5 for Windows 95/NT combines the easy-to-use interface of the World Wide Web with the power and functionality of the world's most popular BBS software. The result is an exciting solution that provides you with the tools to create anything from a basic information system to a dynamic online service.



**Wildcat! 5 is more than
just a Web server.**

With built-in support for public and private messaging, real-time chat and intelligent file search and retrieval capability, Wildcat! 5 gives you much more than just a basic Web server. Wildcat! 5 lets you create a genuine online community where callers come back again and again.

Create Your Own Superhighway!

For more information call:

800-807-2874

See it in action yourself.

Point your web browser or telnet to:
bbs.mustang.com
or by modem: 805-873-2400



Connecting The World™

Mustang Software, Inc.
6200 Lake Ming Road • Bakersfield, CA 93306
Voice 805-873-2500 • Fax 805-873-2599 • BBS 805-873-2400
Internet <http://www.mustang.com>

© 1996 Mustang Software, Inc.
All names are trademarks of their respective companies.

GADGETS AND GIZMOLOGY

by Gary Funk

HAYES CENTURY RACK 16



Despite the move to the Internet, the heart of online connectivity at this point remains the analog modem. The move to V.34 standardization of 28.8 kbps connections sped things up a bit, but most calls to bulletin boards and the Internet are via analog modem. One recent survey indicated that some 60% of Internauts get there through a 14.4 kbps or 28.8 kbps dial-up connection. As a result, the most popular offering of most small Internet Service Providers is the 28.8 kbps dial-up account. And like BBS operators, ISPs often wind up with a roomful of analog modems, serial cables, power bricks, and assorted detritus that makes an equipment room a daunting place in which to try to locate ONE failing modem or trace a phone line.

The answer to this modem clutter is of course the rack mounted modem set. In the past, these have been offered at a gruesome premium over the cost of individual modems. Additionally, they were problematic in a world where modem speeds increased annually. Today, maximum analog modem speed appears to have stabilized at 28.8 kbps and most interest in higher speeds seems to come via ISDN.

Hayes Microcomputer Products, Inc. recently released a new series of rack mount modems that many Internet Service Providers and bulletin board operators may find attractive. Hayes introduced their new Century Rack Systems at the ONE BBSCON, held in August in Tampa, Florida. Within a few short weeks they began shipping this new system to sysops and ISPs.

Normally, a new modem does not get much attention unless it provides a significant speed increase. While this system does not offer any speed increase,

it does offer several other attractive features which warrant a closer look. Hayes has introduced the Century 16, which features 16 modems in a single 19-inch rack, and the Century 8, which sports 8 modems.

OPTIMA RE-OPTIMIZED

The Hayes Century series features an Optima 288R V.34+Fax fax/modem card that sports the features of the popular Optima 288 modem. But it isn't really just an Optima 288 in a rack system. The Optima 288R modems have been redesigned from the RJ-11 jack to the LED's.



The Optima 288R modems include ROM-based help screens for easy installation and full FAX support. These modems also support Distinctive Ringing and Caller ID. The 288R V.34+Fax modem is designed around a 10 1/4" by 4 5/16" circuit board with a double-sided 31-pin edge connector at one end and nine LED indicators and two push-button switches at the other.

While this modem still uses the Rockwell chip set, gone are the removable ROM chips that had to be replaced to upgrade the old modems. Hayes has finally moved the modem ROM to FLASH memory. This means the software in the modem can now be upgraded by downloading a file and transferring it to the modem using a special command. **AT!FLASH.**

HANDY FEATURES FOR SYSOPS

There are also the two push-button switches labeled MB (modem busy) and LB (loopback). While these are not new to modems, they do come in handy when testing and trouble shooting. The MB switch will take the modem off-hook and busy the phone line. This can be useful when you have a phone line go bad in the middle of your hunt group. There is a jumper just behind the switch that enables or disables it. This is a good idea for those who have busy fingers around the equipment.

The LB switch puts the modem in loopback mode which is good for testing the modem and software. Although the loopback switch does not have a jumper to enable/disable it, I feel it should for the very same reason the modem busy switch does.

When either the MB or LB switch is on, the MR (modem ready) LED will flash at a rate of two times

per second. The OH (off hook) LED will also turn on when the MB switch is on.

In addition to the standard LEDs on the front panel, Hayes has added an additional LED, labeled SL (select). This LED is useful only on the Century 16, as it is used to show you which modem has been selected by the Display Control Panel.

MODEM CONTROL MADE EASY

The Display Control Panel (DCP) is the single, most useful feature of the Century Rack 16. The DCP contains a 12-character liquid crystal display (which looks very much like the same

sion of up to 8:1 for data speeds of up to 230,400 bps. It of course supports connections to older 14.4 kbps, 9600 bps, 2400 bps, 1200 bps, and even 300 bps modems. I'm picturing the World Wide Web at 300 bps — cool.

BORING, FLAWLESS PERFORMANCE

This system was extremely easy to set up. After it was de-boxed, we looked at it, poked it, felt it, and even read through the documentation that came with it. It looked high-tech, weighed less than 16 Optima 288 modems, and only had one power supply. This is great, this one unit will take up less space, use less power, and be easier to maintain. What's the catch? There had to be something that we missed, something that would not work the way it looked. It replaced an odd assortment of Hayes Optima 288 V.34/V.FC modems, U.S. Robotics models, and a few others used on the BBS for direct dial callers and on the IPAD terminal server for our dial-up SLIP/PPP accounts. It was all fully functionally in less

than 10 minutes.

The Hayes Century Rack 16 stayed up for the next three weeks without a single modem problem. It just worked — reliably and without incident. Actually, things are more interesting when they don't work, and in the ways they handle problems. If this item is just going to sit there working, we don't have much to write about.

So I checked with George Peace. George runs both a BBS and a flourishing Internet Service Provider business called Pennsylvania Online (<http://paonline.com>, <telnet://paonline.com>, (717)657-8699 BBS). He was one of the first to receive the new rack system in September 1995. When asked how the new modems were working George said "This new system adds new meaning to the term 'Plug-N-Play'. The modems were installed and working on the eSoft IPAD and the Livingston Portmaster within minutes after unpacking the system." When asked about reliability, he affirmed, "I have had NO modem down time since installing the system, which in itself is an accomplishment for a modem used 24 hours a day and especially for a new product.

PRICING AND AVAILABILITY

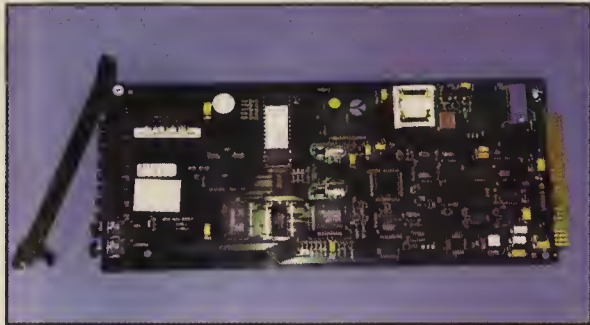
"I was shopping to buy 32 new modems and I added the Century Rack System to the list of possibilities after seeing it at the ONE BBSCON. The deciding factors were price and availability. Hayes had the right price and could deliver the modems within a week of ordering." George added, "When building an ISP business, you need to be able to add modems for your customers. I can't wait six weeks for new modems to arrive. Hayes has made the right moves at the right time and I am a very happy Hayes customer."

For the past several years, Hayes has provided special support programs for BBS System Operators (sysops), by offering the Hayes modems at discount prices of as much as 50%. Hayes has now extended this program to include Internet Service Providers (ISPs), by offering the ISP the same pricing.

The Hayes Century Rack System comes in two sizes. The Century 16 which has 16 modems, a built in power supply, a display control panel for modem status and control, and comes in a 19-inch rack mountable chassis. The Century 8 has eight modems and an external power supply - no display control panel. Both rack systems use the same Hayes Optima 288R V.34+FAX modem.

The Hayes Century Rack 16 has a suggested price of **\$9495** with an ISP/Sysop price of **\$4144**. The Hayes Century Rack 8 has a suggested price of **\$4695** with an ISP/Sysop price of **\$1880**. Interestingly, the rackmounts are available only in a fully populated configuration. You apparently can't buy the cards individually. This leads to an interesting problem we posed to Hayes, — what do we do if one of the cards fails? We were somewhat encouraged by the reply "We don't know, none ever have." And it would be covered under the one-year warranty. ♦

For more information, contact Hayes Microcomputer Products, Inc. at PO Box 105203; Atlanta, Georgia 30348; (770)840-9200; BBS: (770)446-6336; ISDN: (770)729-6525; <telnet://hayes.com>; <http://www.hayes.com>; mailto:tech_support@hayes.com



type of display used on the Practical Peripherals modems), five push-buttons, and a small speaker. The buttons consist of a Left Arrow, Right Arrow, Up Arrow, Down Arrow, and an Enter Button. The Left and Right Arrow buttons are used to change which modem you want to Select or Reset. The Up and Down Arrow buttons are used to set Select or Reset of the modem. Once the display indicates the modem to be Selected or Reset, a press of the Enter Button will produce the desired results.

On a reset, all of the LEDs on the modem except the OH LED will light for four seconds as the modem resets. This is the same as issuing an ATZ command directly to the modem over the serial line.

If you Select a modem, the SL LED will light and the display will show you the status of the modem. If the modem is idle, the display will read "Ready." If the modem is active, the display will show such items as Carrier, Mode, Quality, Protocol, Compression, and Connect Rate. Not only does this give you something new to look at, the information can be very useful when testing the quality of phone lines and other modems.

Hayes is claiming an improved V.42bis compression scheme for data compres-

Introducing Your Worldgroup™ Solution Providers

At BSI Technologies, we give you the choices that allow you to create a successful online service. Our staff consists of experienced programmers, consultants and system integrators with a diverse background in online network technology. Let us be the support team that brings your system online.

If you're thinking about starting your own online service, consider these two time saving options: enrolling in BSI's training seminars to help you learn the ins and outs quickly or having BSI run your system on our Service Bureau. Let our experienced technicians handle all the technical details, and free you to do what you do best - run your business! And we also offer World Wide Web options, as a stand alone service or with our Service Bureau. Take the BSI ramp onto the Information Superhighway!



Training Classes:

We offer a complete line of training seminars for the system operator. From novice computer users to experts, our courses offer all the information you need to get your new online service up and running fast --- or to learn the "tricks of the trade" for optimizing your existing system.

These seminars are available at our educational facilities in South Florida, or they can be delivered on-site and customized to your specific audience.

Introductory- Two days for the novice sysop introducing you to: Menu Tree, Forums, File Libraries, Security, Polls & Questionnaires, Configuration Decisions, Auto RIP Menus and BBSDRAW.

Intermediate- Three days for the experienced systems administrator on using: Pseudo Keys, GalactiBoxes, GALLU, GalactiBoards, Text Blocks, CD ROMs, Hide/Dim Options, and Backing Up Your System.

Advanced- Two days of highly technical curriculum focused on: BREQUEST, B_ASSIST, MHS Gateways, LANs and The Multi Media Extensions.

Internet Connectivity Course- Two days on connecting your system to the Information Superhighway covering: Routers, CSU/DSUs, World Wide Web, FTP, Telnet, Rlogin, Finger, HTML, Bandwidth, Browsers and Newsgroups.

Service Bureau:

For those who don't have the time or technical skills necessary to run their own online service, using our service bureau can be a cost effective alternative. We take care of the details, such as daily backups, off site storage, a disaster recovery plan, and a technical support help desk for your callers, so that you can concentrate on promoting your system.

Whether you're an information provider or a customer service center, offering technical databases or catalog sales, BSI's Service Bureau can work for you. We offer X.25, Internet, World Wide Web and telephone dial-up lines for maximum exposure. There's no need to worry about how your users will connect. Flexible billing options allow you to offer it all.

World Wide Web Services:

The Internet is growing at a phenomenal rate, and everyone wants to be a part of it. To make it happen you need lots of hardware, special phone lines, software and expertise. BSI's Web Service handles all this for you. We've invested in state-of-the-art, redundant Windows NT and Novell servers, a full T-1 and the latest Web Server software. Take advantage of the opportunity to have your business on the World Wide Web.

Galacticomm has lowered prices on Worldgroup, and BSI is passing the savings on to you! Check out these new, super low prices!

Worldgroup 8-User:	\$475
User Six-Packs:	\$185
Client Server Dev. Kit:	\$315
X.25 Software Option:	\$795
Extended C Source Kit:	\$395



Technologies

Voice: (305) 434-0189

Fax: (305) 434-7116

BBS: (305) 434-5619

10030 Griffin Road

Fort Lauderdale, FL 33328

BBSNet™

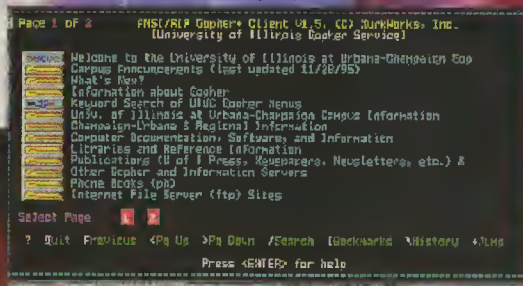
for NetWare

CONNECT YOUR BBS TO THE I-WAY!

Increase subscriptions with real-time Internet access

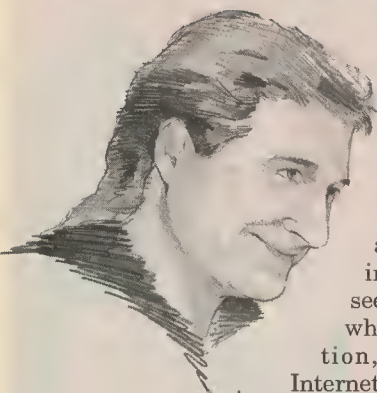
Works with most boards including: Wildcat, PCBoard, Searchlight, RA, Synchronet, Powerboard and other door capable boards under DOS, Desqview, or OS/2 (DOS window).

Requires: Novell Netware/386



WEBWATCH

BABB'S BOOKMARKS by Chris Babb



Chris Babb is a Senior Systems Engineer for Control Masters, Inc., a Systems Integrator located in Downers Grove, IL, where he designs industrial automation software by day. He's a member of the Aquila BBS/Internet Team by night. Chris has worked with Aquila since 1990 and currently handles technical support, Web design and construction, Internet training and various other online and offline duties. In his meager spare time, Chris enjoys music, playing bass guitar, the outdoors and his kitties. You can reach Chris via <mailto:chris.babb@aquila.com>

Sometimes you just have to wonder about things. I usually wonder about the Internet and its directions. I wonder about the limitations that are being imposed, not by the technology (we've all seen how to get around that), but by people who are ignorant and afraid of the information, the ideas and the abilities that the Internet offers to anyone and everyone. I wonder why the press seems to dwell on the illegal happenings on the Internet rather than the legitimate uses and incredible opportunities it offers to a growing world of users. I wonder which hot application of today will be the gopher of tomorrow. I wonder if I shut my garage door after I leave for work. Most of all, I wonder about what sights and sound will steal our attention next on the Web. I'm rarely disappointed.

In the last few months, a whole new genre of software has become available that makes the Web of yesterday almost feel like the bell-bottom pants of the 70's. Java-enabled browsers have been a hot topic. Netscape has it and I'm sure that the Microsoft Internet Explorer will get it. And there is always the Sun version of the Java Browser. The only thing that seems to be a problem is that not everyone can just sit down and program a Java applet. Regardless, you will need to have it to feel empowered and complete when sucking Web.

VRML (Virtual Reality Modeling Language) is another hot topic on the Web. VRML allows you to walk or fly through 3-dimensional worlds. You can examine detailed objects, interact with them, rotate them and generally do the *Lawnmowerman* or *Disclosure* deal without the bulky body-gear or special glasses. Other aspects of VRML deal with surface textures (what the objects should look and feel like) and *Hyperobjects*: clickable objects that can spin you off to another VRML world, Web Page, FTP Site and more. One of the most interesting VRML programs I've seen

to date even gives you the ability to interact and chat with others who are visiting the same site.

The standards and technology for VRML have come miles since I first looked at it back in August. But, the *worlds* (as they are called in VRML terms) are still a little slow and the whole concept has a little ways to go before it becomes something you can't live without. Worlds are also a pretty scarce commodity as there are few tools available that put the power to create worlds in the hands of the average Webmaster or user. With the breakneck pace of the Internet these days, I'm sure things will be much changed by the time this issue ends up in your hot little hands.

There are several VRML capable browsers available. All of them very Web Browser-like in appearance but with a new interface to learn, separate bookmark lists to deal with and an entire new set of bugs to aggravate us. Gee, just what we all need! But, as I said before, the only way to feel empowered and complete ("VeRMel-ized" as I'll call it) will be to have the ability to do VRML if you happen to come across it on a Web page.

One of the ways to avoid the plague of helper applications, separate browsers for VRML or God-knows what else that falls out of the Internet sky, is something Netscape implemented with their release of Version 2.0 called "Inline Plug-Ins." These are special applications that through calls to the browser, are seamlessly integrated into the client window and allow the user to view multimedia content without having to deal with Helper-Apps or wait for another interface to load in order to see, hear or use things like VRML. As I was finishing this article up, a plethora of Plug-ins became available. Some of these are so exciting and offer so much to your Web browsing experience that I just have to clue you in on them.

Well, I think it's time to become virtual with some of the new technology and offerings that are available on the Web.

VRML Browsers

These offerings are some of the VRML stand-alone browsers available and the single VRML plug-in available for Netscape. All of them offer something slightly different but all of them function both as a basic Web and VRML browser. Again, all of them are at some point in their Beta cycle (as everything for the Internet seems to be) and as we have all been finding out, that "B" in the version number stands for "Broken." Prepare for a few crashes but don't let that deter you or you may well be included in the "small gonad" category of users. Find one you like and have it primed and ready when you want to view that 3-D chair that someone spent innumerable hours modeling to perfection with cloth and wood and even the gum underneath it.

Machine requirements for doing VRML are on the hefty side. A minimum 486/66 with 8 Meg RAM and an accelerated video card with a minimum of 256 colors is tolerable. Anything less is painfully slow. The recommended machine configuration is a Pentium with 16 Meg RAM and video card capable of 3D hardware acceleration and 256 colors. Hard drive requirements vary for each of the browsers but since hard drives are virtually free these days, this shouldn't be much of an issue.

WEBFX - PAPER SOFTWARE

<http://www.paperinc.com/>



The first plug-in available for Netscape 2.0 in both 16 and 32 bit versions. This plug-in installs effortlessly and takes advantage of the internal workings and features of Netscape. Landing on a VRML page will automatically load the world into the client window of Netscape. Bookmark it, save it to disk or reload it using the Netscape controls and features. Full VRML 1.0 support, gzip compression, hyperobjects and rendering are fully supported. Future developments include Java and JavaScript support with many other features planned. Babbman recommended for Netscape 2.0 users.

WEBSpace - SILICON GRAPHICS INC.

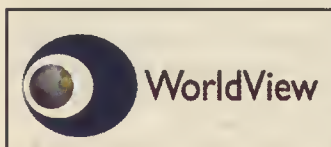
<http://webspace.sgi.com/>



The port of the SGI WebSpace client for Win95 and WinNT is available from here. WebSpace offers a great interface and several clients for developing your own worlds. The version I was using (1.0 Beta 2) is still slightly buggy but integrates easily into your present browser as a helper application. This program also is part of the Open Inventor Package for developing your own VRML worlds.

WORLDVIEW - INTERVISTA SOFTWARE

<http://www.intervista.com/>



This was the very first VRML browser available for Windows on the Internet. The current version 0.9g is "Pre-Beta." This is a respectable client with the basic features needed for browsing VRML

worlds. Be sure you are set up for 256 colors only if using the Win32s version of this browser.

FOUNTAIN - CALIGARI COMPANY

<http://www.caligari.com/index.html>



The first VRML browser that also offers the ability to author VRML Worlds. Extensive documentation and tools for designing your own worlds are included in this version. This program also uses something called 3DR from Intel. It is a Pentium specific, software based, 3D rendering accelerator which may or may not be automatically installed for you. If you're using a Pentium machine

and you get an alert message when starting Fountain, simply switch to the Fountain directory and run INSTALL.EXE. Babbman Recommended as a stand-alone Browser.

VR SCOUT - CHACO COMMUNICATIONS

<http://www.chaco.com/products/vrscout/>



A respectable VRML Browser that is fast but lacks features available in some of the browsers I have listed here. It's only Version 1.1 so I expect that it will improve over the next few months. This entrant also uses the Intel 3DR Rendering Accelerator. Probably the best feature in this browser is the pointer that appears when you move in the

VRML world. Maybe this is something that all the other browser authors should think about as life in 3D can get confusing at times.

VRWEB - IICM, NCSA AND THE UNIVERSITY OF MINNESOTA

<http://hyperg.iicm.tu-graz.ac.at/Cvrweb>



The most basic and smallest VRML browser of the batch. It offers some great features not found in

other browsers such as "Heads Up" navigation which makes getting where you want to go a breeze, but is missing other features such as basic bookmarks. Installation is also as easy as unzipping the files into a directory and launching the program. If you're just looking for the basics in a VRML browser that launches fast as a helper application, this is the one you want.

I installed and used all of the above browsers with little difficulty. My recommendations are made above as to what I feel are the best of the lot but I'm sure that features will be added and new versions released by the time you are reading this. For the best information and most complete listing of VRML browsers available as well as every other program you need to feel like the ultimate Internet nut, visit The Consummate Winsock Apps List (<http://cwsapps.texas.net>) by Forrest Stroud. The best source of Internet programs available on the Net.

VRML Sites

This is where things start to get a little sticky. VRML is fairly new and the tools for creating worlds are scarce in a form that allows for easy and widespread creation as of yet. Hence, there are not a lot of places you can go and many of the worlds that do exist are simplistic in form, but there are a few exceptions. A lot of what I've been seeing are mainly stand-alone worlds with little ability to branch out to other worlds or Web sites. This, without question, will change as the months go by and again, better sites should be available by the time you're reading this.

The sites listed above for VRML Browsers are just about the best source for VRML information. Each of them has listings of available worlds and links to important information on VRML standards and directions. Below are a few of the exceptional sites I've found along with non-VRML sites that will help you sort out and use the technology of VRML.

INTEL CORPORATION

<http://www.intel.com/>



First, stop at the main Intel Web Page. From here, you can get all of the usual information you'd expect to find on Web Site these days. The feature that I'm looking for though, is VRML. This page offers 2 different VRML worlds. Both are extraordinary. They are filled with detail, filled with links and also offer multimedia selections from within the VRML world as well as a bit of entertainment.

When you click on the Pentium Pro World, it builds a tunnel around you with some interesting details at the end of it. Take a walk down the tunnel and you'll have access to other Intel worlds and Web pages at the click of your mouse. Moving in on the tunnel will reveal more detail and allow you to read the selections available. Several of these will take you to Web pages that contain or direct you to the information you want. The rest will take you into more detailed worlds to explore. These worlds contain links to other Intel pages of

interest and also have multimedia links in them. Microsoft Video AVI files are spread liberally throughout and help to make your walk-through memorable. Be sure to take a close look at the computer monitors and notes lying around.

Another world to explore from this page is the VRML Volunteer world. This is a virtual treasure hunt through worlds developed by Intel. The current contest centers around the Intel 3D Museum. Each week for 4 weeks, a new world is posted along with clues on what you need to find or do. One of the more unique uses of VRML.

CYBERTOWN

<http://www.cybertown.com/>

This was one of the more interesting VRML sites I found. Nicely done graphics, several worlds to enjoy and a little laughter. This site makes use of the WebFX plug-in for Netscape. At the same time, it also makes use of Shockwave in conjunction with WebFX. This shows just one of the many possible combinations and uses for both. This site also shows the unique relationship that can exist between the VRML and HTML standards. By using the "embed" tag along with height and width specifications, a small VRML window can be embedded into the page while still retaining normal HTML tags within the page. Utilizing the Shockwave plug-in just adds to the total experience.

The screen capture below shows 3 things. The normal Web page with text and links, a small VRML window that contains a virtual freeway and below that is a Shockwave window with the dashboard of a car. Complete sounds and a moving steering wheel complete the picture. Driving down the virtual freeway has never been safer for other people or more forgiving of the fact that I couldn't keep the car on the road!



Another world is the first free 3D VR Apartments on the Web. Clicking on your choice of 3 apartments will load it up and allow you to do a walk through. You can even save this world and drop it on your own web page and claim it, much to the chagrin of other dwellers, as part of the bargain. Several other VRML worlds adorn these pages and there is lots more than meets the eye at this site. Cybertown is in its early stages and I shudder to think what it will be like in a couple of months! I suggest that you make a visit here even if you're not interested in VRML as I'm sure it will keep you busy with sites and sounds for quite a while.

VIRTUAL SOMA

<http://www.hyperion.com/planet9/vrsoma.htm>



Virtual SOMA was developed by Planet 9 Studios and is the first 3D city model to be placed on the Internet, according to the opening page of this site. SOMA stands for "South of Market Street Area" and this is what the virtual world is based on. What's most interesting about this world is that actual photos of the buildings in real life have been attached to the buildings in this virtual world. Not only that, but you can also enter a building and if they have a Web page, you can simply click and you're there. There are also animations and numerous other things to explore and do.

This site seems to work best with the WorldView Browser. Other browsers will work, but will be lacking the photos of the buildings which is one of the finer points of this site. I'm impressed with the concept and implementation of this world. The ability to freely fly through and to familiar sites around a city is a great idea, but what makes this site work for me is the added dimension of being able to access information about the company whose building I'm actually in. Very cool.

ALPHAWORLD

<http://www.worlds.net/products/alphaworld/index.html>



The concept behind AlphaWorld is simple. Build a virtual reality where people can go and talk with each other. Then make it interesting by representing everyone with an "Avatar" (3D representation) so that everyone can see each

other walking around. Then, make this more interesting still by allowing ownership of land and the ability to build almost anything you want with textures and sound to boot. Sounds cool? It is!

AlphaWorld is not a VRML browser in the same sense as those listed above. You won't find sites on the Web. This program and its sister program, the *Jumangi Pavilion*, are virtual worlds in their own right. They connect to a specific site where information on who's there and what's been built is transferred as you walk around. The program is simple to install and use; it represents yet another fascinating side of the Internet.

In order to use AlphaWorld, you first must register to become a citizen. This is quick and simple. Simply click on the "Become a citizen" link, enter your e-mail address, click a button and wait a few moments. Then check your e-mail for a confirmation and immigration number. Choose a username and password and enter the immigration number on the next web page and you're set. All that's left is downloading the client, installing it and running it.

When you first run AlphaWorld, you are dropped on a plain green landscape with the mountains in the background. You'll also begin to see others who are running this program walking around in their 3D avatars. If you think about this for a minute, you begin to get a strange feeling as you realize that all these 3D figures walking around could be controlled from next door or half-way around the world. Typing anything and pressing enter will display your username and what you wrote above your head for others to see. After a while, you'll also notice that buildings, houses, streets, waterfalls, fires and a host of other objects begin to appear in front of you. If you have a sound card, you'll also hear music that fades in and out as you walk around this amazing world.

You have the ability to stake out unused land and build your own little virtual world on it. You can copy pieces of buildings from others or select from a large selection of pre-defined pieces. What you stake out and what you build is yours and will always be there when you jump into AlphaWorld as the server side of the connection keeps track of ownership. Only you can change anything on your property.

This is another one of those Internet toys that will have you staring at your screen for hours and is a most highly recommended addition to your arsenal of things to justify your existence on the Internet. You can be sure that more worlds will become available in the next few months to keep you tuned in.

SHOCKWAVE

<http://www.macromedia.com>

Shockwave allows you to see Director 4.0 multimedia animations that are integrated into a Web page. I was so impressed by the capabilities, the clean lines and usability of this product that I have to include some links to sites that are using them. Macromedia claims that there are



over 250,000 plus professional developers and enthusiasts and more than 1 million business users who are utilizing Macromedia products today. This fact and the fact that Director is so easy to use by anyone with the smallest degree of imagination and skill is sure to mean that we will be pulverized by the shockwave of sights and sounds that Shockwave will produce.

I was surprised by the number of initial offerings of "Shocked" sites available until I visited a few and was left with a feeling that THIS is what we have been waiting for in terms of interactive content on Web pages. Everything from spiffy animations, games and sounds to beautiful interfaces for Web page navigation and real-time news and information updates is doable, useable and incredibly attractive with Shockwave. The file sizes are extremely reasonable also. You just got to see it to believe it and you just got to have it! ♦

NutSite© Of The Month

This is a Babb's Bookmarks first. A site so thoroughly nutty that it only deserves an address and a warning. No description, not even a name. That will become clear enough if you have the guts to actually visit this page. Now the warning. If you are practicing religion, don't visit this site. If you are a heathen, then I guess it's OK but you still may be offended. Enough said. Oh, yeah, don't complain about this site if you don't like it. It's freedom of speech and our constitution expressly allows for it, much to the dislike of the minority. Plus, the guy who did it HAS to be nuts!

<http://www.unc.edu/~sca4807>

You have been warned!

I think this will do for this month. As I mentioned before, for the best information on VRML, building VRML worlds and libraries of objects and ideas, be sure to visit the Browser pages. I think this will keep you all busy for a few hours at least. After this month, I think I'll remove the virtual and virtually's from my vocabulary. Have fun.

I have these and all of my past articles available for your clicking pleasure at:

<http://www.aquila.com/babbs.bookmarks/>

Keep those Nutsites rolling in! Comments, good or bad (preferable good) should be clicked off to:

chris.babb@aquila.com



POWERBBS 96

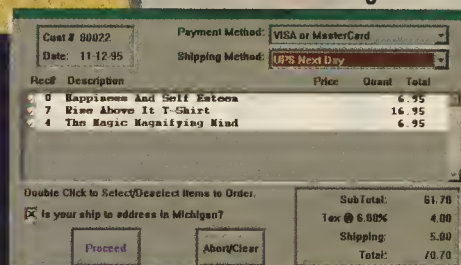
The Ultimate 32 Bit GUI BBS Software

**32-Bit Speed
And Performance**
16 bit version included for Windows 3.1

Fully Customizable Menus

24 bit Graphic Previews!

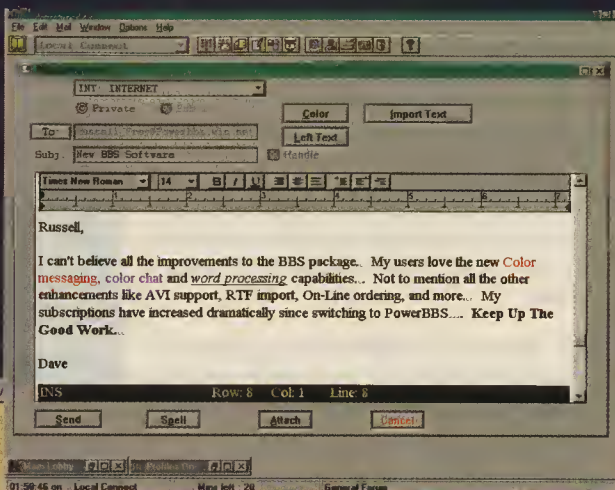
On-Line Order Processing!



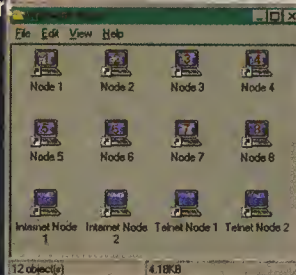
On-Line Databases



Fully Integrated Messaging, With FREE Off-Line Mail Reader



Full Network Support



Proprietary protocol that supports simultaneous bi-directional transfer and allows connection over any TCP/IP network, including the Internet!

PowerAccess - royalty free client software, complete with address book, multi-BBS operation, signatures, taglines, Internet mail, serves as a complete communications package, supporting ANSI and other protocols such as ZModem.

What's The Better Value? You Decide..

Features	Wildcat5	Worldgroup	Mindwire	Mediahost	Excalibur	PowerBBS
Price for 4 Node Package	\$349	\$595	\$495	\$425	\$199	\$189
Years Windows Product Available	BETA	DOS	1	1	BETA	5
Graphical Formats Supported	3	23	7	7	3	26
GUI/ASCII/ANSI Connects	✓	✓				✓
Create 24-bit 5k-10k Resizable Previews				✓		✓
Play WAV & MIDI Files		✓		✓		✓
Free Off-Line Mail Reader		✓				✓
GUI (RTF) Message Editor		✓	✓		✓	✓
On-Line Databases		✓	✓	✓		✓
Runs DOS Doors	✓	✓				✓
Direct Internet/Network Access	✓	✓	✓	✓	✓	✓
Internet Mail/NewsGroups	✓	✓				✓
Telnet/FTP Access	✓	✓				✓
MAPI Client	✓					✓
Multi-Room Teleconference	✓	✓	✓	✓	✓	✓
Full-Video AVI Support				✓		✓

Data compiled from reputable sources, November, 1995.

"PowerAccess also makes it easy to select forums, collect and save messages, and read and respond to messages offline. This last feature is one that others, such as Excalibur, don't match and that Worldgroup supports, but doesn't make easy."

Computer Shopper.

"I like the fact that I can allow ASCII, ANSI and Windows GUI callers all on the same system. Also, the fact that with PowerBBS, ANSI and Power Access users can share the same teleconference area, which even Worldgroup does not have yet."

Call BBS for Demo or to Order at 516-822-7396 or order on Compuserve. (Go PBBS)
PowerBBS Computing: 35 Fox Court, Hicksville, NY 11801 - Tel: 516-938-0506



PUBLISHING ON THE WEB by Michael Erwin

Part 13 — CREATING A WEB BBS

Before last month's foray into Web cameras, I promised you that we would build a World Wide Web based BBS. And that's exactly what we are going to do. Why build a WWW BBS? Why not? Most of you have or use a traditional BBS. But with a little finesse we can build a very usable WWW BBS, not just making a traditional BBS "telnet-able" by giving it an IP address and tying it to a "virtual modem."

Most web sites already serve files, programs, data, and images. We can even send mail with the newer web browsers. And talk about being able to create custom menus! We can do just about anything now with HTML. These parts of a traditional BBS you are already doing with your web server and clientware. You can even control access security with most web servers. The only thing most web sites don't provide is a good way to communicate with the other web site users. We would also want to keep track of those threaded discussions.

These threaded discussions, whether forums, discussion groups, or message areas can be a main attraction for users to a traditional BBS. So why would the web be any different? It's not. You and a few million others are on the Net. How many of those people do you think also call traditional BBSs? All of them! Matter of fact, I bet you sysops know many users who never use the Net.

One of the great things about traditional BBSs is that they normally turn into a real online community. Some boards pride themselves on being message oriented — meaning people oriented. This sense of community is one thing lacking in most web sites. We are going to fill this void this month.

So let's get started!

A few months back I was faced with the challenge of setting up a discussion forum on a website. I could have just created a local newsgroup on the news server. But the problem was, since it was a private newsgroup it wouldn't be distributed on the net. I could have sent it out to the net, but there is no guarantee that every news server would pick it up. And why create more traffic on a line you have to pay for?

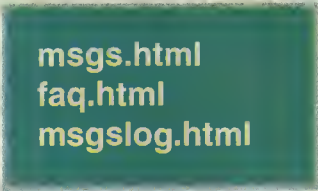
My first stop on my search was Yahoo!, which eventually lead me to *Matt Wright's Script Archive* at <http://worldwidemart.com/scripts/>. Matt's e-mail address is <mailto:mattw@alpha.pr1.k12.co.us>.

His **WWWBBS v1.0** system is made up of 3 PERL scripts, a README text file, a FAQ, a HTML page and a short log file. Yes, this system requires PERL.

As I have said before, and will probably say again, get PERL for your environment. PERL is available for just about everything. Also make sure to buy O'Reilly & Associates' *Learning PERL*, ISBN 1-56592-042-2, and *Programming PERL*, ISBN 0-937175-64-1.

Matt also has available a version for windows based web servers. He should have WWWBBS v2.0 out by the time you read this. It should be very similar and all of these configuration notes should apply. The system is quite easy to setup. I wish all boards were this way. So hang on! Here we go again...

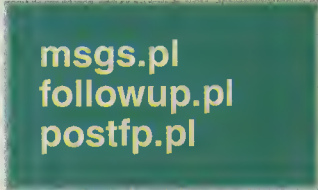
I will assume you run your own server. Yeah, I know what the say about assume. Copy the following files:



```
msgs.html
faq.html
msgslog.html
```

into your **www docs** directory tree. For example I copied it into **/var/www/htdocs/msgs** on the BSDI UNIX box. You will also need to create a subdirectory, called **/messages**. So now my tree looks like: **/var/www/htdocs/msgs/messages**. The **messages** directory is where the system will store the messages, of course. I will make one more change to this arrangement later.

You will need to copy:



```
msgs.pl
followup.pl
postfp.pl
```

into the CGI-BIN scripts directory. For example mine went into **/var/www/cgi-bin**. This is not optional. If you don't know where your CGI-BIN directory is you can look into the HTTP SRM configuration file. Those of you that are using WebSite, put them into **/website/cgi-shl**.

Now, we will need to edit some of these files so that it all works. Let's break it down into digestible pieces. The first PERL script, **msgs.pl**, is the main script. It takes the information from the form on **msgs.html** (See Figure 1), processes it, adds the entry to **msgs.html** and creates the html file for the message.

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information <mailto:mikee@access.mountain.net>

Figure 1,
HTML message entry form

There are several variables and options that you will have to define. Below is a list of them. You will need to change the path accordingly for your website document tree. These are my paths for `/var/www/htdocs`:

```
# Define the Variables for msgs.pl
$filename = "/var/www/htdocs/msgs/
messages/msgs$$$.html";
$logfile = "/var/www/htdocs/msgs/msgslog.html";
$mesgpage = "/var/www/htdocs/msgs/msgs.html";
$mesgpageurl = "http://www.boardwatch.com/
msgs/msgs.html";
$filenameurl = "http://www.boardwatch.com/msgs/
messages/msgs$$$.html";
$followup = "http://www.boardwatch.com/
cgi-bin/followup.pl";

# Choose Options
$uselog = 1; # 1 = YES; 0 = NO
```

You can turn off the messages log file by setting `$uselog = 0`. I want the message logs. It produces output like Figure 2. I suggest you use it also.

Figure 2,
Message Log File Output

The variables `$mesgpageurl`, `$filenameurl` and `$followup` must be edited to show your URL, i. e., `www.boardwatch.com`. Did you notice the use of `$$` in `$filename` and `$filenameurl`? Make sure that those symbols are there. Those are the message numbers based on the process ID or pid. If you are using a UNIX based server make sure this file is `chmod 755`.

The next PERL script that needs editing is `followup.pl`. This script will take the information from an already posted message, process it, and turn it into a form on which the user who is replying can then write a comment. The form that comes to `followup.pl` is entirely in hidden fields which are created by `msgs.pl`. When the user clicks on the link Post Follow-Up Message it then gives him this form. There are also a couple of variables that need to be filled out before it will work correctly. The two variables you need to define are set the same as `msgs.pl`. This script needs to `chmod 755`. Look below for an example.

```
# Define the Variables for followup.pl
$mesgpageurl = "http://www.boardwatch.com/
msgs/msgs.html";
$followup = "http://www.boardwatch.com
/cgi-bin/followup.pl";
```

The `postftp.pl` script takes the form generated by `followup.pl` and turns it into a html message, which is then posted to its own html page and a link is added to the message it is a follow-up on. (See Figure 3)

Figure 3,
Follow-Up Message Output

`Postftp.pl` also includes several variables that will need to be defined as the other two PERL scripts. This script also needs to `chmod 755` on UNIX based servers. Look below at an example.


```
# Define the Variables for postfp.pl
$filename = "/var/www/htdocs/msgsg/
  messages/msgsg$$.html";
$mesgpageurl = "http://www.boardwatch.com/
  msgsg/msgsg.html";
$filenameurl = "http://www.boardwatch.com/
  msgsg/messages/msgsg$$.html";
$logfile = "/var/www/htdocs/msgsg/msgsglog.html";

# Choose Options
$uselog = 1; #1 = YES; 0 = NO
```

Once you have finished editing these three PERL scripts, you are done and ready to set up the HTML front end for your BBS.

The **msgsg.html** page will need some editing. This is the html document that you want the users to first see. It will contain the headings of the postings, as well as a form for users so they can post as well. The first thing you will want to change is the title and heading of the script. (See Listing 1) Change this to fit your needs. You might want to also change the first paragraph. You should keep the FAQ available for people to use.

Keep the **<META>** tag in there and also leave all of the form fields alone. If you change the names on the forms you can and will mess everything up. You will need to change the action of the form on this page to point to your **msgsg.pl** script. You can also change the link at the bottom to point to your e-mail address. Make sure that you put this file in a directory with read-write access and give this file read-write access.

The **msgsglog.html** file is optional. You will only need it if you set the **\$uselog** option to 1. You shouldn't have to change much of anything about this, as you will be the only one see-

ing it. The **faq.html** file does not need anything done to it either. Just make sure you set the file's permission so everyone can read it.

The one thing I would add is to create a file called **index.html** in the your WWW BBS directory and in the messages directory. This could be used for anything. I use it so people who just request **http://www.boardwatch.com/msgsg/** or **http://www.boardwatch.com/msgsg/messages/** get a html document instead of a directory listing of the messages.

The **messages** subdirectory is where all of the users' messages will be stored, and you should arrange it that way in the script. Make sure your server has read and write access to this directory also. The access rights are normally the source of problems with WWW BBS. If you have problems with WWW BBS, and you haven't hacked on the PERL scripts, check your server's error log for clues of what is going wrong.

And that's all there is to it. Simple for me to say, right? Matt has published this as GNU software, which means you can freely use, modify and distribute the program. Pretty cool, huh? Thanks Matt.

Once you get this up and running, you can modify the PERL scripts and html files to fit your needs. What I like most about WWW BBS is how easy it is to modify to our needs.

That's pretty much it for setting up a basic WWW BBS. Drop me a note when you get your WWW BBS up and running. Of course, as with a traditional BBS, you can spend hours, days, months or years customizing it to what you want. This is just the starting point.

While I am thinking about it. I would like everyone to go take a look at Jen Kitchen's WWW page. Jen is a BW reader using tables as a cool way to show off the icons she has designed. Her URL: **http://mars.superlink.net/user/jen/webpages/bullets/bullets.html** ♦

mikee@eve.net

LISTING 1: Web BBS Message Area Page

```
<html><head><title>Boardwatch WWW Message
  Board</title></head>
<body><h1>Boardwatch WWW Bulletin Board</h1>
Please keep all <a href="#post">posts</a> appropri-
ate. This service is to be used for announcements,
messages, and questions, but not for flames and
chat sessions. All inappropriate messages can and
will be deleted. Here are a couple of <a
href="faq.html">Frequently Asked Questions</a>
about this page.<hr>
<ul>
<META begin>

</ul><hr><a name="post"></a>
Post a Message to the Message Board:<p>
<!-- Make sure to change this to point to the msgsg.pl -->
<form method=POST action="http://www.board-
watch.com/cgi-bin/msgsg/msgsg.pl">
Your Name: <input type=text name="realname"
  size=30><br>
```

```
Your E-Mail Address: <input type=text name="user-
  name" size=40><p>
Subject of Posting: <input type=text name="subject"
  size=42><br>
<Select name="kind">
<option>Message
<option>Question
</select><br>
<textarea COLS=60 ROWS=5
  name="comments"></textarea><p>
Optional Link To A Page: <input type=text
  name="link" size=40><br>
Name of the Link: <input type=text name="linkname"
  size=40><br>
Optional Image URL: <input type=text name="image"
  size=40><p>
<input type=submit value="Add Message"> * <input
  type=reset value="Reset Message"></form><hr>
Send all questions/comments about this page to the
<a href="mailto:sysop@boardwatch.com">
  Sysop</a>
</body></html>
```


Spacestar™ Internet Solutions

Professionally Engineered Solutions since 1979

Systems Include: DNS, FTP, WEB, POP Mail and News Services
Preconfigured Systems are *Ready-To-Run* with Ongoing Support
Complete Turnkey Firewall and Security Server Solutions

**Is Your Company
Safe from the
Internet?**

Internet Service Provider Systems

Level 1 - 1 to 299 Users
Level 2 - 300 to 999 Users
Level 3 - 1000 Plus Users

Spacestar Communications™

A Division of Firmware of Minnesota, Inc.

Voice 612-896-1100 Fax 612-896-1750

4445 West 77th St. Edina, MN 55435

sales@spacestar.net <http://www.spacestar.net>



- Do you have a commercial BBS?
- Do you need to expand the scope and reach of that BBS?
- Do you need to offer local access to remote users?
- Is this a business orientated service that requires reliable data communications?

If the answer to these questions is yes, you need to consider ADP Autonet. Autonet provides sysops an X.25 packet-switched network to help you expand nationwide, or even worldwide.

1.800.827.8254

Visit our Home Page at: <http://www.adpnet.com>

Put the power of Automatic Data Processing's Wide Area Data Communications Network to use for you. Call **1.800.827.8254** today. We'll rush you a free sample information packet detailing nationwide communications options for BBS Sysops.



AUTONET™

175 Jackson Plaza • Ann Arbor, MI 48106

**GO
NATIONWIDE
WITHOUT GOING
BROKE**

INTERNETICA



Born and raised in Australia, Steve Jenkins moved to Portland, Oregon with his family in 1978. He is currently owner and Webmaster of [Windows95.com](http://www.windows95.com) at <http://www.windows95.com> which he administers from his two-bedroom apartment in Provo, Utah. Steve has a BA in French Literature, and is currently completing a Masters degree in Business Administration from the Marriott School of Management at Brigham Young University. He lives with his wife, Kay-Dawn, and his 15 year-old turtle, Sherman. Steve works as a consultant on Internet strategy to a number of firms, is an avid Netsurfer, and is one of the founder channel operators of *IRC #Win95-net*. When not sitting in front of his computer being yelled at by his wife to "shut that darned machine off," he enjoys skiing, piano, karate, teaching, writing, and wishing his wife would let him back on the computer. Steve's love of computers started in the early 80s, when he saved up enough money to buy a Commodore 64. He still argues that the C64 is one of the most powerful and user-friendly systems to date.

WIN95 COMMUNICATIONS by Steve Jenkins

WIN95 LEARNS TO SAMBA

In an era where "reaching out and touching" is becoming increasingly easy, a few products are leading the way. Among them is a suite of apps that has existed for a while, but that has been creating a bit of a stir these past few months: **SAMBA**. Users have been able to hook up Windows for Workgroups, Windows NT, and OS/2 clients to a UNIX box running SAMBA for quite a while, but never has connecting to a SAMBA box been easier or more powerful than with the mixture of Windows 95 and the Internet. This month, you'll find out what SAMBA is, where you can get it, and what you can do with it. I'm sure you'll agree that it's about to revolutionize the Win95 client - UNIX server relationship.

WHAT IS SAMBA?

Besides being a pretty funky dance, SAMBA is a suite of programs that allows clients to access UNIX filesystem and printers via the *Session Message Block* protocol (SMB). In other words, you can essentially set up a UNIX machine so that your Windows 95 Microsoft Networking Client (MNC) will view the UNIX filesystem (directories and files) in the Win95 Explorer - allowing you to drag and drop, click-rename, map network drives, and more. In fact, I use SAMBA to maintain all the pages and graphics at my www.windows95.com web site without ever touching an FTP client. I just drag an HTML file into my text editor, make changes, then hit the Save button. I've almost forgotten how to spell "FTP."

The SAMBA suite was originally created by Andrew Tridgell and has evolved into its current state with the input of hundreds of Net citizens. As of the writing of this article, SAMBA is in version 1.9.02. There are plenty of SAMBA binaries floating around the Net, but the current version of the source will compile on a variety of UNIX hosts, including SunOS,

SOLARIS, Linux, AIX, BSDI, IRIX, and plenty of more obscure UNIX flavors. And the best part? It's public domain!

WHERE CAN I GET SAMBA?

SAMBA currently ships with many versions of UNIX. I happened to bump into SAMBA when I was browsing through a BSDI CD-ROM. The easiest way to get SAMBA is to check out the SAMBA home page at <http://lake.canberra.edu.au/pub/samba/>. You'll not only find the latest version of the SAMBA source code, but also binaries for popular versions of UNIX, links to SAMBA man pages, FAQs, and newsgroups, plus a searchable index of all of the above!

WHAT CAN I DO WITH SAMBA?

SAMBA lets you access a UNIX filesystem as if it were a shared directory on a Microsoft network. When you connect to a SAMBA share, you can run programs, edit files, store programs, and more — all without the need for an NFS client. If you map the drive, you can save documents, spreadsheets, text files, HTML files or any other file into the SAMBA share from within any Windows 95 application. It works over a LAN from 3 feet away, or over the Internet from 3 continents away.

HOW CAN I MAKE IT WORK?

As with any client-server interface, both the client and the server need to be set up (if you haven't figured it out already, the SAMBA machine will act as the server and your Win95 machine will act as the client). If you're the average Windows 95 user who's "plugged-in" to the Net, you'll have to convince your Internet Service Provider that running SAMBA is a good thing (show him or her this article... that should do the trick). SAMBA is configured solely on the



UNIX machine, and required lots of icky UNIX administration stuff. Just make sure that your ISP gives you access to your home directory and your HTML directory.

If you are an ISP that likes all that icky UNIX administration stuff, you'll need to compile and configure SAMBA on your UNIX box. Check out the SAMBA home page mentioned above for all the necessary info. Since this is a Windows 95 column, I'll concentrate on setting up Win95 to "talk SAMBA."

In your Windows 95 client, you'll need to set up the Client for Microsoft Networks. If you're not sure how to do this, check out my December, 1995, column "Sharing Folders Over the Internet" or surf on over to <http://www.windows95.com/connect/>. Make sure that the IP address of the SAMBA server is in your **LMHOSTS** file. For the **computername**, use the UNIX computernam of the system you're trying to reach. For example, if you're trying to connect to a SAMBA box at **free.willy.com** whose IP address is **205.205.205.205**, your LMHOSTS file should look like this:

205.205.205.205 willy

Reboot, and you're ready to connect to the SAMBA box!

CONNECTING TO A SAMBA SERVER

In nearly every aspect, connecting to a SAMBA server is exactly like connecting to an NT server or Windows 95 peer machine. Simply Run the computernam with two slashes (\\) in front of it. To hook up with the computer in the above example, you'd run **\\free**. This would display a window with all of the publicly available shares. However, if you want to access a private share, you'll need to enter the sharename when you make the initial connection with the SAMBA box. For example, if your private directory on the SAMBA box is shared as **kazoid**, you'll need to run **\\free\\kazoid**. You'll probably be asked for a password to make the connection. Your ISP should have set up the SAMBA box so that your UNIX password and your SAMBA password are the same.

If you'd like to map a network drive to your SAMBA share, simply click on **My Computer**, choose **Map Network Drive**, then enter the computernam and sharename of your

SAMBA share, just as if you were putting it in the Run dialog box. If you'd like to re-establish the connection the next time you log-on, check the appropriate box.

A FEW PROBLEMS WITH SAMBA AND WINDOWS 95

The SAMBA/Windows 95 marriage isn't quite perfect, yet. I've noticed that when trying to connect to my SAMBA box, the network connection times out every now and again. If this happens, simply Run the SAMBA box's computernam again, or if you've already got the SAMBA box's dialog box open (the one that pops up when you run only the computernam), select the box and press F5 to refresh the connection.

Another small problem with SAMBA and Windows 95 is case sensitivity. Long filenames copy from one system to another without a hitch, but if you've got a filename on your Win95 client with any uppercase letters, they'll be changed to lower-case when they're copied or moved to the SAMBA box. Additionally, although you can select and change a UNIX filename on a SAMBA box in an Explorer window, it's impossible to make any of the characters upper case. You'll have to telnet to your SAMBA host and change the filename with the UNIX **MV** command.

The last incompatibility that I was able to uncover is SAMBA's inability to copy a program into its own directory. In the Windows 95 Explorer, if you grab a file, hold down the CTRL key, then move the selected file but keep it in the same folder, Explorer makes a file called **Copy of <filename>**. A SAMBA Explorer window won't let you do this at all.

A FINAL WORD

Small incompatibilities aside, SAMBA is worth setting up if you want Win95 Explorer-based access to UNIX filespace. It's a nice alternative to saving, FTPing, then deleting the old file on your hard drive. You can maintain files on a UNIX box much faster, as well. It replaces the need for the UNIX **cp**, **cd**, **mv**, **cwd**, **pwd**, and **ls** commands, plus gives you "right-click" abilities with your UNIX files. So if you're ready to simplify your cross-platform interface, give SAMBA a try. It gives a whole new meaning to "Exploring UNIX." ♦

POTENTIAL SECURITY RISKS WITH WINDOWS 95 AND SAMBA

There are a couple of potential security problems you should look out for if you plan to use Windows 95 and SAMBA. The problems occur when the SAMBA client software, called **SMBCLIENT**, attaches to a Windows 95 server (the opposite of what was described in the article). This is a not a bug in SAMBA, but a bug in how the Windows 95 File and Printer Sharing drivers handle the SAMBA client.

The first problem was discussed in the December 1995 Issue of **Boardwatch** in "Sharing Folders Over the Internet." In order to solve this problem, you must download the **File and Printer Sharing upgrade** patch from Microsoft's Web site at <http://www.microsoft.com/windows/soft ware/w95fpup.htm>, or from the Microsoft Network online service,

CompuServe, America Online, and Prodigy. Updated drivers will also be mailed to any user free of charge if they call Microsoft's FastTips line at (800) 936-4200. More information is available from Microsoft at the above Web address as well.

The second problem has to do with a new program floating around the Net that can be used to decrypt Windows password files. When you connect to a SAMBA server (or an NT server, or an OS/2 server, or a Windows 95 server), the password you use when you login is, by default, encrypted and stored in a **.pwl** file, usually in your **\\Windows** directory. Someone has figured out how to decrypt these files and learn a user's passwords. Depending on how sensitive you are to security issues, you can do one or all of the following:

- Make sure that none of your **.pwl** files are in your shared folders
- Make sure that you've upgraded to the new File and Printer Sharing drivers

mentioned above, or it won't matter which directory your **.pwl** files are located, someone can get to them

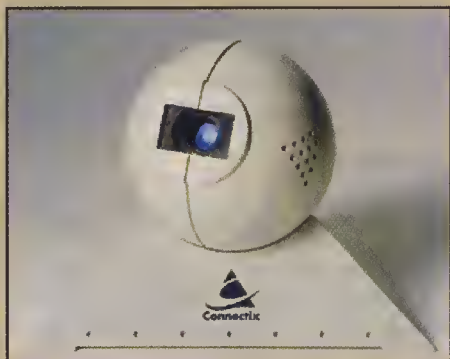
- Delete all **.pwl** files from your hard drive
- Whenever you connect to a network resource for which you have to supply a password, make sure that the option to "save this password in your password list" is NOT checked. This will force you to enter your password each time you log in to the device, but it will also maintain the highest level of security.

If you do not take these steps to protect your network security, you are leaving yourself open to potentially serious security problems. If you'd like to disable File and Printer Sharing altogether on your Windows 95 client, you may do so by removing the File and Printer Sharing service from the Network dialog box in the Control Panel. You will still be able to access SAMBA, NT, Windows 95, or other shared resources as a client, but the risk of others attaching to your system is eliminated.



A funny thing happened to me on the way to the coffee pot yesterday morning. Ding-Dong... I looked out the door and saw the comforting sight of a FedEx truck sitting in front of my house. I always get a fuzzy feeling when I see that truck as it usually means that something new for my computer is about to pop out of a package. In this case, it was a **Connectix Quickcam!**

The QuickCam is basically a black and white video camera, about 2.5" in diameter, that looks like an eyeball. It sits on a triangular rubber base or can be mounted on a tripod. Connecting it to your computer is as easy as plugging in the parallel port connector and another connection between the keyboard and computer for power. Resolution is decent at up to 320x240 pixels and it can capture up to 15 frames/second through its 3.6mm lens and view field of 65 degrees. Focus is fixed at between 18" and infinity with software adjustable exposure which allows for a very respectable picture. The best and most impressive feature of all is that this little camera sells for around \$100!



The QuickCam also comes with 2 programs and a CD-ROM. **QuickMovie** will allow you to make your own Microsoft Video (.AVI) Movies. You can select the size (80x60 to 320x240 pixels), adjust brightness, contrast, White Balance and 16 or 64 shades of gray. Capture Rate is selectable for up to 15 frames/second or by time for time-lapse movies. It also allows you to record sound along with your video through a soundcard and microphone.

QuickPicture will allow you to take a snapshot and even throws in that 35mm camera sound if you have a soundcard. You have control over the settings listed above with the exception of capture controls. The image can then be saved to the clipboard or in BMP or TIF formats.



Quickcam video capture of the Babbman

Installation was a breeze under Windows95 and within moments, I was staring at myself on my computer. Be warned that QuickMovie movies can result in a multi-megabyte file if

you're not careful. I also found that depending on the image size and capture speed, up to half of your frames can be lost while recording. The most interesting effects can be achieved by setting a reasonable time-lapse rate and letting it go. QuickPicture was very simple to use and results in file sizes of up to 100K depending on the picture size settings.

The CD-ROM contains demonstrations of the other software available from Connectix, such as their Video Conferencing Software, which I was still awaiting at the time of this writing, and image editing software for manipulation of captured images.

I thought about potential uses for this neat little "eyeball." My original idea was to set up my very own Web Cam Site and maybe show me working (boring) or my kitchen table (again, boring) or maybe the kitty litter box (disgusting). Then I remembered that I had a copy of **CU-SeeMe** sitting on my computer somewhere. I decided to run it and see how much I had to do to get it working. Much to my surprise and delight, the program ran and I popped up on my screen in living black & white! It seems the latest version of CU-SeeMe was designed with the QuickCam in mind and just automatically detects it and works with it. I then logged into one of the default reflectors that comes with CU-SeeMe, put my chin in my hands and was greeted by 7 others who were doing exactly the same thing.



CU-SeeMe Videoconferencing

CU-SeeMe is a very cool (yet unpolished) client that allows you to connect to a "reflector" server that runs on a UNIX box and allows you to watch people, who were lucky enough to have a camera and video capture card (or maybe even a QuickCam), watch other people. If you're "camera challenged" you can still run the program and watch others as a "Lurker" (any theme here yet?). CU-SeeMe duplicates the camera settings found in QuickMovie and QuickPicture. The newest client also includes audio capabilities for full videoconferencing.

ing. The sound quality is not as good as *WebPhone* or *Iphone* but it is passable at times. You can see up to 8 individuals who are transmitting video, including your local window, along with a listing of others who are connected both with and without cameras. An eye icon will be displayed in either open or closed position next to the names and on the receiving video windows to denote who can and can't see you. You can also enter into a private conversation with another party or type a message in your local window that is broadcast to everyone who can see you.

Other features of CU-SeeMe allow for control over transmission settings in Kb/sec, an important setting for those with ISDN or faster connections to the Internet as some reflectors will just dump you if you exceed their maximum speed allowed, and compression settings. These will control the change tolerance and refresh intervals, which determine how quickly the remote video displays will be updated. Most of these features are dependent on your connection speed to the Internet and a little experimentation is recommended for the best possible response.

A "participants" window is available that will show you who is sending, who is lurking and who can see and talk to you. There seems to be some slight control over who can see and talk to you by clicking on the eye, speaker and microphone icons listed next to each name in this window. You can also choose at any time to stop or start sending and receiving video, which is useful if you want to see what's going on and what type of situation you've dropped into before plopping your mug up on the Internet for the world to see.

I eventually found that there are 2 versions of CU-SeeMe available. One at Cornell (Ver. W0.84b1 at <http://bio444.beaumont.plattsburgh.edu/CU-SeeMe.html>) and the other at White Pine Software (Ver. 1.01a.1 at <http://www.wpine.com/CU-SeeMe.html>). The version from White Pine Software is a demo version of their Enhanced CU-SeeMe that will include added features such as Whiteboards (a sketching space that conferees can share) and Video Mail. The offering at Cornell was their latest at the time and has fixed a problem with the White Balance setting when using the QuickCam. There are some other lingering problems here and there but they are slowly being ironed out.

There are several ways to find reflectors on the Net. Occasionally, there are notices placed in the newsgroups and in various sites on the Web. The Web listings are for the most part clickable. If you have the White Pine Software offering, you can set it up as a helper application within your browser. If you use the Cornell version, you'll need to download a program called *GO CU-SeeMe GO* (<http://www-personal.umich.edu/~johnlaue/CU-SeeMe/gocusmgo.htm>) that will give you the same functionality. I must say that using the program with links off the Web is much easier than navigating through the site manager within both versions of CU-SeeMe. There is also more of a description of what I was going to get into on the various sites. The Web sites listed in this article also have large listings of special events and reflectors to connect to.

There are connection limits placed on each reflector for the number of participants and you will soon get used to a "Reflector Full, Try Again" message. Reflectors also seem to be up and down at regular intervals.

Some reflectors that are available on the Internet are "Pay For Use" (or pay for abuse). By paying a specific fee, you are

given an ID code to use when connecting to a site. These sites are pretty specific (and graphic) but could be an exciting and interesting way to spend some of your Internet time and display your..... well, pretty much anything you want on the Internet.

Another way to use CU-SeeMe is to connect point-to-point with another user. I've been doing this with Kevin Behrens of Aquila BBS for several days now. All you do is type in the IP number of the party you want to talk to and as long as they are also running CU-SeeMe, it will connect for a little one-on-one. Although we couldn't get the audio portion of the program to work reliably, it certainly adds a new dimension to a phone call and works as a primitive form of video conferencing. We'll also be trying our Iphone and WebPhone in conjunction with CU-SeeMe over the next few weeks to see how well they perform together.

Let me throw a little caution your way. Occasionally something interesting may happen on a reflector, but for the most part, be prepared to see people just watching other people. It's actually quite entertaining. If you're easily offended, please be very careful where you go as there truly are some sites to behold (or at least shut your eyes tight against) out there. I've seen the moon arisin' several times and for me, it wasn't all that pleasant. I won't go into any further detail, but it can be enough to make the most tolerant out there blush or look away in amazement.

Another thing to watch out for is that when you are connected to a reflector, your IP address is readily available for everyone to see. I've had people suddenly connect to me after I disconnected from a reflector and left CU-SeeMe running. That's fine if you are expecting it, but it can be a little unnerving to have someone suddenly pop up on your screen and watch your every move.

Well, I've been sitting here, watching other people watch me ever since. I've been amazed at the number of reflector sites available both here in the U.S. and all over the world. Truly, I can "keep an eye on the world." For the price of this nifty gadget, you can too. For more information on getting your very own QuickCam, browse through the computer catalogs that we all seem to get, or jump on the Web and make a visit to <http://www.connectix.com>. Also keep an eye out for the color version of the QuickCam which should be available (and affordable) by the time you read this article. ♦

RESOURCES:

QuickCam - Connectix Corporation

2655 Campus Drive
San Mateo CA 94403
(800)950-5880
(415)571-5100 voice
(415)571-5195 fax
<mailto:info@connectix.com>
<http://www.connectix.com>

White Pine Software, Inc.
40 Simon Street
Nashua, NH 03060-3043
(603) 886-9050 voice
(603) 886-9051 fax
<http://www.wpine.com>

Cinecom: Video Conferencing Via the Internet

by Steve Graves

Telephone companies and computer manufacturers have been trying to develop affordable video communication and conferencing for more than thirty years. Merging technologies of image digitalization, network communications, and increased bandwidth are now making this science fiction staple a reality. Although cost-effective video phones are still somewhere in the future, desktop video conferencing is for real and it's here now.

Organizations and even individuals can now broadcast and receive full motion video over computer networks — and at an affordable price. For example, Cinecom Corporation offers a variety of online video products, including the recently released CineVideo/Direct 1.05. Cinecom's new product enables users to speak via live video with other users all over the globe. The program connects users through WAN, LAN, or Internet links. Suggested retail cost: Less than \$40. If you don't have cameras and/or video capture boards, Cinecom bundles complete systems starting at \$150.00 per work station for black and white video, or \$700.00 for a color system.

ABOUT CINECOM

Cinecom is a small, privately held company, headed by CEO Skip Potter. The organization is known for producing third party software for Galacticomm's Major BBS and Worldgroup but is expanding to support multiple platforms. Potter has introduced a line of online imaging, chatting, messaging, and video conferencing software that runs under

Galacticomm's Worldgroup, Mustang's Annihilator and Durand's Mindwire client/server platforms. The company's newest products don't require any BBS package at all but run under the various MS Windows operating systems.



Although many competing video technologies are available, Cinecom again proves that the most dramatic technological advancements often come from independent entrepreneurs rather than the bureaucratic behemoths. I hasten to point out that Cinecoms has built its products on advances in video capturing technology produced by some of these same behemoths. Let's look at Cinecom's product line.

CINEVIDEO/DIRECT

CineVideo/Direct, Cinecom's newest entry into Desktop Video conferencing, supports simultaneous one-on-one video, audio, and text communication. The company plans to release an upgrade package that can support many-to-many image broadcasting sometime next quarter.

CineVideo/Direct runs under Windows 3.11, Windows 95, or Windows NT on a multimedia-equipped 486/100 or a Pentium 60. CineVideo Direct will run on lesser platforms, although performance is not likely to be satisfactory. You can get away with 8 MB of RAM but you probably won't be happy with less than 16 MB. Reserve 40 MB of hard disk space for the server plus an additional 4 MB for each client used.

You won't need a fancy monitor; a simple VGA display with 256 colors or higher will work just fine. We aren't talking Technicolor transmissions here. Make sure you have a free full-length ISA slot for your video capture card if you don't already have one installed. Of course, you'll need a connection to transmit to your image; a 28.8 or 56Kbps modem will work (sorta), an ISDN modem or LAN/WAN is better, a T-1 or T-3 is best.

INSTALLATION

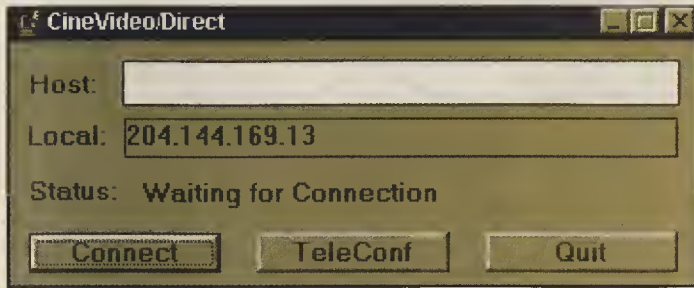
We installed Video/Direct on a 486/75 with 16 megs of RAM, running Windows NT server version 3.51.

Steve Graves is the founder of *Technical News Service Inc.* (T-N-S) and editor of *SysNews.Com* - The Journal of Online Products and Services. His online magazine for sysops and webmasters, includes news, articles, editorials, reviews, software guides, and software libraries. As a full time software reviewer, Steve installs, runs, and maintains the BBS and Internet software he reviews. Steve lives and works in Cheverly, Md., about a half mile from Washington, D.C. with his son Brendan, age 10, and his wife, Mary. He authored the *20 Minute Chess Master*, one of the first interactive computer books. Steve holds commercial, instrument, and instructor pilot certificates and enjoys reading, computers (some days), magic, and music. Steve can be reached at mail to: editor@sysnews.com, http://www.sysnews.com or (301) 773-8899 voice (10 a.m. to 6 p.m. EST M-F).

Installation was a piece of cake. We downloaded the demo software from Cinecom's web server — <http://www.cinecom.com> — copied the file into a temporary directory, and ran **setup.exe**. The program installed itself in less than two minutes.

OPERATION

One good thing about new products is that the developer hasn't had time to clutter up the interface with bells and whistles that get in the way of basic operations. If you don't have too many options, you can usually figure out how to make the program work. The CinVideo/Direct interface is bare bones simple. After starting the program, four windows appear: *CineVideo Direct*, *ViewPort*, *Capture*, and *Teleconference*.



The window labeled *CineVideo Direct* has three buttons and a text box. Enter the IP address of the user you wish to contact, click on the *Connect* button, and the system does the rest. The *Teleconference* button brings up the teleconference window for online text chatting.

Once connected, the *ViewPort* window displays your caller's picture. The *ViewPort* menu offers a status command which analyzes and displays connection efficiency including FPS (Frames Per Second), AAS (Average Audio Size), AFS (Average Frames Size), and CPS (Characters Per Second). Audio input is accomplished with any microphone compatible with your soundboard and the camera is normally hands-free.

The *Capture* window lets you see the picture your system is sending to the caller. This feature lets you monitor not only your system performance but your on-camera performance as well. The *Settings* menu on the *Capture* Window allows you to toggle audio compression, set compression ratios and color, and to control capture rate.

If you need to communicate to someone without audio or video capability, you connect in the same manner as you would for video and then bring up the teleconferencing window. The teleconferencing window has a box for incoming text and box for outgoing text. You read the incoming text, type your response in the outgoing box, and click on send to transmit the message.

That's all there is to it. The system is about as intuitive as it gets. I'm sure that in time more features will be added, user preferences will abound, and the package will come with a three hundred page manual. But right now, a ten-year old will have this package up and running and will be chatting with a buddy in Tangier in minutes. Corporations will need to budget little or no funds for training employees.

TECHNICAL HIGHLIGHTS

CineVideo/Direct supports full duplex video conferencing, meaning you can simultaneously transmit and receive video and audio. It supports Intel Indeo technology, uses 16-bit wave audio cards, and can work with NTSC or PAL composite video input — standards supported by most camcorders. The software will work with most video cameras on the market including the Howard HA series and the Connectix QuickCam. The system doesn't require any special video equipment. You can plug a generic camcorder into the VCR NTSC/PAL input. CineVideo produces fixed 160 x 120 pixel windows and supports simultaneous local and remote video views.

Any digital camera can be used to shoot the subject. You'll also need a video capture board unless you're using the QuickCam. Tested boards include the Videospigot Board, the VideoLogic Captivator Board, and Logitech's MovieMan Board. Most conventional video boards have a maximum display rate of 15 frames per second (fps). Intel's Smart Video Recorder Pro can handle up to 30 fps but requires a Pentium class CPU. The Connectix QuickCam plugs directly into a parallel port and doesn't require a capture board at all. The drawback is that QuickCam produces only black and white images.

What if you need to talk with a computer user who has Cinecom's software and a soundboard but no camera? No problem. If the user has at least a soundboard and microphone, you can chat in voice only mode. If your friend doesn't have even a soundboard? CineVideo/Direct offers a real-time text chat feature enabling you to send and receive typed messages to the "hardware challenged." Essentially, CineVideo comes with built in redundancies allowing users to communicate even if a system component fails.

CONNECTIVITY

CineVideo users can use 28.8 KBPS modems, ISDN telephone lines, Novell IPX/SPX, or TCP/IP LANs/WANs. The software is LAN physical layer independent: it works equally well on Ethernet, T-1, or Frame Relay wired systems.

CineVideo/Direct uses a proprietary compression technology for real-time compression and decompression of video images which results in consistent, high-speed, high-quality image transfers. The transfer speed affects video quality. In fact, your point-to-point connection is just as important to performance as the CPU power running the software. Say you run CineVideo on two Cray mainframes but establish your point-to-point connection using 28.8K modems. Under this scenario, a pair of 486 powered PCs would perform almost as well as the pair of Crays.

PERFORMANCE

System performance depends on three elements: The CPU platform, connect speed, and available bandwidth. Transmission performance is measured in frames per second or *fps*. (We can't refer to any technology without an acronym, can we?)

A slow connection under Cinecom's system causes the image to move sluggishly, like a scene from a movie shot in slow motion. A very slow connection might produce a series of still shots. In contrast, older technology resulted in jerky-jerky movements, a la the old Max Head television character. The smooth rendition of moving images is especially impressive in complex network environments.

CineVideo can transfer seven to ten 160x120 pixel frames per second. Black and white images transfer faster than color. As a comparison, Walt Disney's animated films run at about 12 fps while theaters screen full-motion action video at thirty fps. At three to five fps, talking heads are easily transmitted with little blurring or jerkiness — although the movement may appear slower than normal. At five to ten fps, image movement is in real time. Facial expressions and movement are quite clear. You can see people chewing gum, grinding their teeth or yawning.

If you connect with a 28.8 KBPS modem, you will be limited to transmitting/receiving at four fps in Black and White or just one fps in Color. Using a dual channel ISDN is much preferred. You can get 15 fps using the full 128 KBPS made possible with the A and B channels. Using a single ISDN channel limits you to about 8 fps with audio and color — still quite acceptable for transmitting talking heads. Of course, if you have access to a T-1 link, your connect speed is more than enough to handle the transmission overhead.

One other factor may affect your systems performance: Internet congestion. If an Internet bottleneck delays your signal, performance will sag. You can minimize this problem by connecting via your in-house WAN, assuming it too, isn't overloaded. And by the way, a lot of teleconferencing over your WAN can quickly prove burdensome to the system. This stuff eats up much bandwidth.

COMING UP – CINEVIDEO PRO

Cinecom plans on shipping *CineVideoPro* early next quarter. It is the high performance version of CineVideo Direct, which is limited to point-to-point communications. CineVideoPro will support many-to-many communications when used in combination with *CineVideo Reflector*, central server software capable of handling multipoint connections. Skip Potter says that CineVideo Reflector will permit up to 64 simultaneous connections per server, a limit imposed by the TC/IP stack. Cinecom plans to offer multicasting exceeding the 64-connection limit by linking multiple reflectors. Link a few together and throw a worldwide New Year's Eve party.

CineVideoPro includes a white board for chalk talks. Instead of shipping your people to seminars, trainers can deliver seminars worldwide over the Net. I wouldn't be surprised to see aspiring infopreneurs using this system to provide accredited college courses and technical training at your site. In fact, video conferencing technology lends a whole new meaning to the term "on-site support." ♦

OTHER CINECOM VIDEOCONFERENCING PRODUCTS

The products below all require the Worldgroup BBS server. Cinecom plans on releasing Mindwire and Annihilator versions once those server platforms are released.

CineVideo/PtP — Point-to-point, full video and audio communication using Worldgroup BBS as its central server.

CineVideo/Broadcast — Permits live, one-to-many broadcasts. Useful for delivering policy statements, official announcements, etc. to employees at wide spread sites.

CineVideo/Theatre — Enables the broadcast of prerecorded video to several users at the same time.

AUDIOCONFERENCING PRODUCTS

CineTalk requires World group BBS and allows group chats and one-on-one conversations. While users converse in real time, CineTalk transmits a still image chosen by the person transmitting. Connectivity is achieved over the Internet, LANs, or modem. Great for social boards.

CineTalk/PtP — This one-to-one conferencing system allows users to converse in near real-time while looking at still pictures of each other.

CineTalk/2.0 — This many-to-many version allows users to talk in near real-time with recorded audio messages combined with their picture.

CineNotes — Users can leave full Video/Audio messages. Simple voice mail with a picture.

WHERE YOU CAN GET IT

CineVideo/Direct V1.05 can be downloaded at <ftp://cinecom.com/pub/cinvidir.exe>

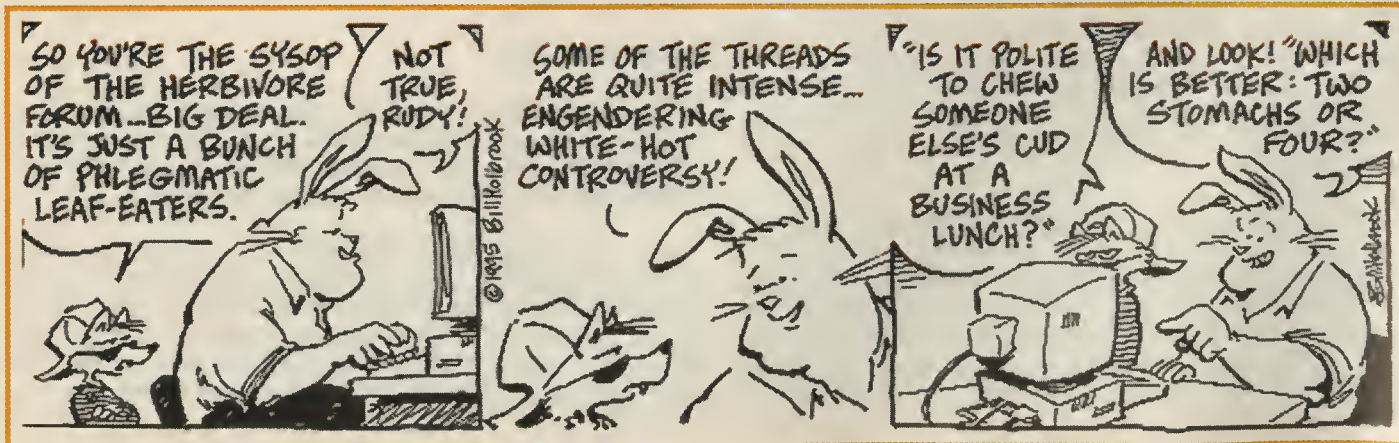
CINECOM Corporation

15621 Neath Drive
Woodbridge, VA 22193
(703) 680-4733 voice
(703) 680-1092 BBS
<mailto:sales@cinecom.com>
<telnet://topgun.CINECOM.com>

Pricing

CineVideo/Direct sells for \$39.95

CineVideo/Direct Pro will sell for \$79.00 when released.



Genesys for Worldgroup



Imagine creating a beautiful, 24-bit color multimedia database that will run on your Worldgroup system! Genesys™ for Worldgroup allows you to easily develop robust graphical on-line informational applications and services. With simple GenScript configuration files, you can custom design your own application with embedded

graphics, text files, and sound files, or select one of our turnkey applications like the Product Catalog™, Auto Seller™, Residential Real Estate™, or the Match Maker™. Since Genesys™ supports Windows Interface Protocol (WIP)™, in addition to an ANSI™ interface, your end-users will be able to access your database with a true all Windows interface, and you can still offer your service to non-Windows callers. Whatever information you have to present, Genesys™ for Worldgroup gives you a flexible, powerful canvas on which to offer it.

- Runs directly on the Worldgroup Server (does not require a second machine!)
- Supports simultaneous data editing on a LAN
- Turnkey applications can place your database on-line immediately
- Support for CMP, JPG, BMP, TIF, WAV files and many others
- Runs stock DBF files from dBASE or FoxPro
- Run multiple database applications simultaneously
- Supports both Windows and ANSI interfaces!
- Simple database configuration from GenScript files
- Includes **FREE** Contact Phonebook application
- \$995.00

High Velocity Software offers a full line of entertainment and business software for Worldgroup, from Internet access to on-line shopping, we can take care of you. Give us a call today for more information, or a free catalog!

HIGH VELOCITY SOFTWARE, INC.

Post Office Box 33455 • Phoenix, Arizona 85067-3455



Product Orders: (800) 572-5582

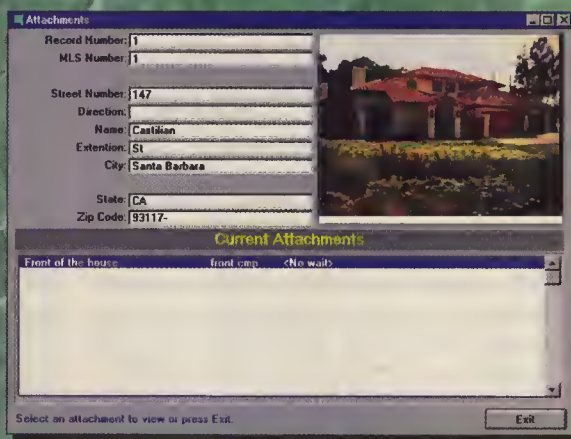
Voice Support: (602) 234-2207

Demo BBS: (602) 222-3000

Telnet: garden.hvs.com

WWW: http:// WWW.hvs.com

FTP: ftp.hvs.com



Online Multimedia Database

USING ISDN FOR INTERNET ACCESS -

Ascend's Pipeline 50

by Jack Rickard



One of the key challenges in the development of a future Internet revolves around bandwidth. Bandwidth is the capacity to carry high data volumes at relatively high speeds. On a network level, this actually isn't as much of a problem as most participants fear. The view of most Internauts is that all of the traffic of the network comes together at some central "heart of the Internet" point. Actually it doesn't, and the traffic is distributed similarly to the hierarchy of connections. There are some pressure points, but backbone bandwidth is largely a problem with ready solutions awaiting cash.

The bandwidth issue is more acute for end users. According to a survey of web users performed by the Graphics Visualization Center at Georgia Tech (http://www.cc.gatech.edu/gvu/user_surveys/survey-10-1995) about 33% of web users are connected at 14.4 kbps and another 26% at 28.8 kbps using dial-up accounts. That's nearly 60% of the 23,000 respondents to the survey who are making the trip at 28.8 kbps or slower.

The web is minimally useful with a good 28.8 kbps connection to a good server. Anything less than that is largely painful. And faster is better. Cable TV companies and many of the larger long distance carriers are issuing a cacophony of empty threats to do something useful and intelligent in this area. Don't hold your breath.

This "last mile" problem was foreseen any number of years ago. The obvious answer has long been to wire consumers' homes with fiber optic cable. But the expense of doing so on a large scale is fairly horrendous. We predicted it would only come on the back of video deployment, not data, a number of years ago. With the most recent telecommunications legislation, most of the telcos are busy breaking themselves up into smaller pieces (US West into two parts, AT&T into three parts) or forming themselves into larger ones (Bell Atlantic and Bell South are currently doing the merger dance and posture routine.) It is unlikely any large scale investments will be made to deploy infrastructure any time soon.

The one technology that might help is **Integrated Services Digital Network** or **ISDN**. Originally announced in 1978, ISDN provides two 64 kbps channels, along with a 16 kbps signaling channel, over the existing copper lines. Originally, the two 64 kbps "bearer" or "B" channels were to carry voice and the 16 kbps "data" or "D" channel was to carry data and/or out of band signaling and control. At the time, 16 kbps seemed like more data bandwidth than anyone would ever need. Today, it isn't seriously proposed for the use of any data transmissions. And

rapidly, a single 64 kbps B channel for data seems weeny. But by inverse multiplexing the two B channels, you can have 128 kbps of bandwidth by installing a card at the telephone company central office servicing your lines. Better, theoretically this requires no changes to the lines themselves at all. It's not nearly as fast as fiber or cable TV lines, but it is roughly five times faster than the best 28.8 kbps analog modems available — and it makes a huge difference in the performance of a link to the Internet.

Deployment of ISDN has taken literally decades and remains spotty. Some areas, such as California, are well served by Pacific Bell. In other areas, particularly in the Midwest served by US West and Southwestern Bell, ISDN is all but unavailable. Where available, ISDN lines range in price from roughly \$20 per month up to as much as \$80 per month. But it provides a much better link to the Internet. The telcos claim about 80% of the U.S. population now has ISDN available. That's probably a bit shy of true, but it's an interesting claim. Pacific Bell, who had offered ISDN at very attractive rates, filed in December for a tariff revision to double them. Similarly, U.S. West, who actually does not install ISDN in most areas they claim to make it available, just filed to increase residential ISDN service in Washington state from \$63 to \$184 per month. Other telcos are dropping rates trying to get the ISDN ball rolling. After many years of non-deployment, it is still chaos as greed battles technology in the hearts and minds of the executive morons in charge of our infrastructure. In any event, ISDN promises to be big in 1996 either way.

In putting together a new publication, the *Boardwatch Magazine Quarterly Directory of Internet Service Providers*, we actually surveyed each of the ISP's. One of the questions we asked was if they provided ISDN connections. Surprisingly, some 40% DO offer ISDN links to the Internet, and most will either set you up with a permanent connection, or a dial-up connection. The average price for single-channel 64 kbps service is \$116 monthly while the average price for two-channel 128 kbps service is \$197 monthly. This is a bit pricey compared to 28.8 kbps service which averages \$23 monthly. But considering the higher costs of installing an ISDN line at their location, the much higher cost of ISDN adapters, and the portion of THEIR bandwidth consumed, it's probably not too far out of line. Clearly,

with a charge of **\$200** per month from the Internet Service Provider and another **\$40** or **\$50** for an ISDN line to the customer site, casual net surfers are not going to go for ISDN until the price falls rather dramatically. But for a small office or serious home worker, **\$250** per month is much more attractive than the **\$1000** and up for a leased line. In areas where ISDN is available, it appears to be a viable incremental option for Internet access.

One of the misconceptions regarding ISDN is that since it is digital, and your PC is digital, that it somehow does away with the need for a modem. Not precisely so. You don't need a device to MODulate and DEModulate data into audio tones, true enough. But you do still need an adapter device that looks, acts, and blinks a lot like a modem. It is normally referred to as a terminal adapter. And looking over the field, they look like nothing so much as modems circa 1980. They tend to have cumbersome configuration issues and frankly, the concept that they inter-operate seamlessly is entirely mythical. All do to some degree it would seem, but there are a host of problems and least common denominator tradeoffs. At this stage of development, there are some serious advantages to having the same or very similar equipment from the same manufacturer at both ends of the link.

The result is that you really need to get the same kind of ISDN adapter that your Internet Service Provider uses. In this way, it not only can connect without issue, but if you stumble on configuration issues, and you will, the ISP has a chance of being able to help you — you're using the same equipment.

This sets up a situation where a scant 1500 Internet Service Operators really get to call the tune as to which ISDN adapters are used. Any ISDN terminal adapter manufacturers that can gain sway over this tiny group of service providers, ultimately owns the market for ISDN hardware. This leverage is similar to the historical situation with BBS operators and modem manufacturers. But if anything, the ISPs have an even more persuasive role. Callers might dial many different bulletin boards, and have a yen for various features to do so. But when it comes to the Internet, they typically have a single physical connection to the network through a single ISP. Features and brands don't make any difference to them at all, as long as it works with THEIR ISP — reliably and fast. Whatever ISDN adapter their ISP uses is precisely the one they want.

In pawing through the piles of ISDN terminal adapters, we have stumbled across one that is at once frustrating and enormously exciting. Ascend Communications has developed a line of ISDN adapters that seem entirely centered on network connectivity to the exclusion of all else. And they have developed some products that are actually quite marvelous. We recently spent a couple of days playing with their **PIPELINE 50** ISDN bridge/router and right up front I'll forfeit the results. Configuration of this box is very nearly impossible — and we are desperately in love with it anyway.

The PIPELINE 50 is actually designed to connect a small office LAN to a larger office or to an Internet Service Provider. It not only passes Internet Protocol (IP) packets, but Novell's Internetwork Packet Exchange (IPX) packets as well. As a result, you can link Novell LANS at the same time you gain Internet connectivity. In our case, we have an office Novell LAN that is connected to the Internet via a 1.544 Mbps T1 leased line. By connecting a PIPELINE 50 to our LAN here and to an ISDN line, we can call from any other ISDN line using a second PIPELINE 50 and have a 128 kbps link to both the Internet and all directories on our Novell file server.

The PIPELINE 50 is quite good at what it purports to do. It uses inverse multiplexing to combine the two 64 kbps ISDN channels into a single 128 kbps link. Actually, when used as a router, it will automatically dial the link when you try to access your network, and it will setup either one channel (64 kbps) or two channels (128 kbps) based on your bandwidth requirements statistically sampled. It will add a channel or drop a channel, or drop the link altogether, depending on your activity or inactivity on the network. And you can rather flexibly configure it in how it does so.

We've been playing quite a bit with Windows95. Unfortunately, most ISDN adapters connect to the serial port of the PC, just like a modem. Windows95 has NO support for ANY ISDN adapter we've found. Rumor has it that a service pack due this year will include ISDN support. They do have a bit of information on using some Motorola units. But basically you have to hunt down a **modem.inf** file from the manufacturer to install an ISDN adapter at all. We did finally get an Adtran ISU 128 unit to work this way.

The PIPELINE 50 works quite differently. It basically interfaces Ethernet to ISDN. So you connect to it using a 10BaseT Ethernet cable — not a serial cable. The result is that it uses the networking features of your computer — whatever the operating system, and looks to your PC like a Local Area Network. As a result, you don't need any particular software. If your PC will work on a LAN, it will work with the PIPELINE 50 — really with no changes at all to the PC software configuration. This transparency of use is not only terribly convenient, but it indicates use by ANY computer and operating system that can be connected by Ethernet.



Pipeline 50 configuration menu

There is a nine-pin serial port on the back of the unit. You can connect a serial cable to this to bring up a configuration menu. This is actually THE original configuration menu from hell. It was clearly designed by UNIX geeks out for sort of twisted revenge on the rest of the world. It features menus, and submenus, and sub-sub-sub-sub menus all done in VT-100 character-mode graphics. And we never found a single configuration item that was obvious. These guys would abbreviate the word TRUCK, something like Tke — and it would refer to something on your water heater, not to anything on your vehicle. We struggled with this configuration for TWO DAYS. The documentation that comes with the PIPELINE 50 is philosophically a perfect companion for the configuration menus — almost indecipherable and containing no useful information of any kind that we could locate. Fortunately, Ascend's product support is outstanding. They talked to us on the phone, telnetted into the PIPELINE 50 itself, dialed into it via ISDN, and generally bent over backwards to get the thing working. I suppose the good news is that Internet Service Providers can virtually assure them-

selves a spot in the world by simply learning to configure and install this device for their customer base.

The payoff is power and transparency of use once configured. The PIPELINE 50 has a bewildering array of features. For security, you can configure it for callback verification, use Caller ID, a simple password exchange, or it will use the Internet standard Password Authentication Protocol (PAP) or Challenge-Handshake Authentication Protocol (CHAP). And individualized packet filter profiles can be established for each caller.

What makes this a configuration nightmare is that they went entirely overboard on options. For example, the PIPELINE 50 statistically monitors bandwidth usage over time to determine when to use a single channel and when to use both channels. This seems like a cool feature. In actual practice, you will connect both channels for 128 kbps operation and just leave it. But a few ISDN areas apply measured usage charges to the link. This seems to be falling from favor as telcos encounter very strong customer resistance to the practice, but it still exists in some areas. So the feature appears to make sense. I just doubt it will be used much. But the PIPELINE 50 gives you several options for performing these calculations, quadratic, linear, and constant. This actually has to do with weighting of recent as opposed to less recent data flow measurements. I can understand how, in the development of this software, the engineers might put in several curve options for testing. I just can't imagine why any end user would care. And the explanation of these options on screen and in the book is just abysmal.

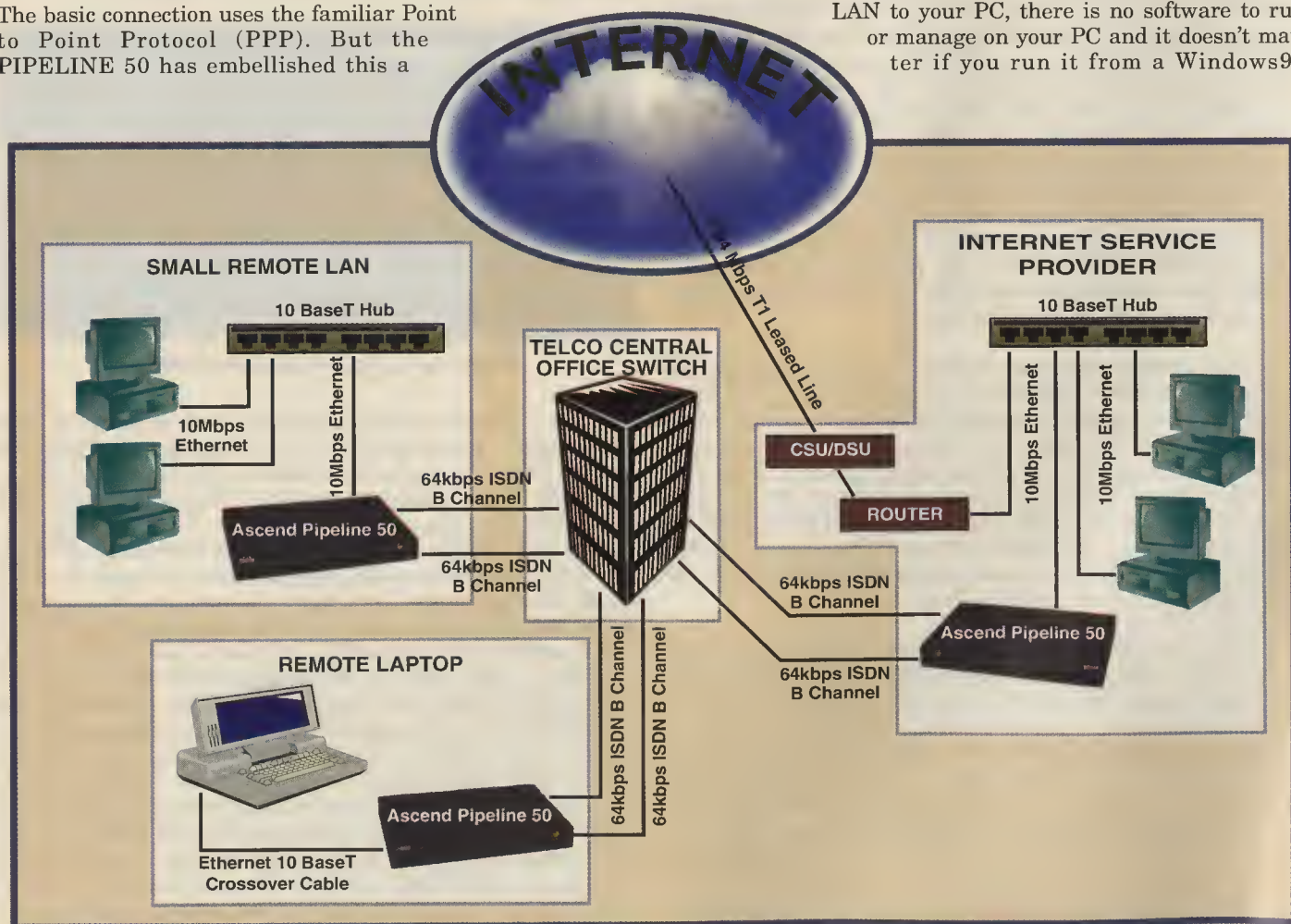
The basic connection uses the familiar Point to Point Protocol (PPP). But the PIPELINE 50 has embellished this a

bit so that you can also configure it to use MPP — a proprietary Multichannel Point to Point Protocol. This is what allows you to combine two ISDN B channels for 128 kbps links, and to disconnect, connect, and operate on 1 or 2 channels as bandwidth requirements vary through the day. It's really quite good, but again, you need an Ascend product on the other end to take advantage of it.

One anomaly that we found was that we wanted to be the same Class C sub-address from home as we are on the LAN. The PIPELINE 50 actually can do this — by acting as a bridge. If you subnet the address and use the PIPELINE 50 as a router, it will indeed do the 1 channel/2 channel switch and disconnect when you aren't using it. But we wanted to plug a laptop into the ISDN adapter at home, and to a 10BaseT wall connector at work, and not have to make any changes to the IP numbers at all. This means the PIPELINE 50 is really acting as a bridge and not doing any routing at all. The problem is, that as a bridge, it ALWAYS has activity and so it never does shut down the link. Further, there is no power switch on the unit at all. So we either have to start up the configuration menu to shut down the link, or unplug it from the wall.

Once you have the PIPELINE 50 connected to an Ethernet LAN and an IP number assigned to it, you can simply telnet into the device to perform configuration. The device itself is small, elegant, and has almost no switches or controls of a hardware nature. Four indicator lights show power, ISDN connections, LAN activity, etc.

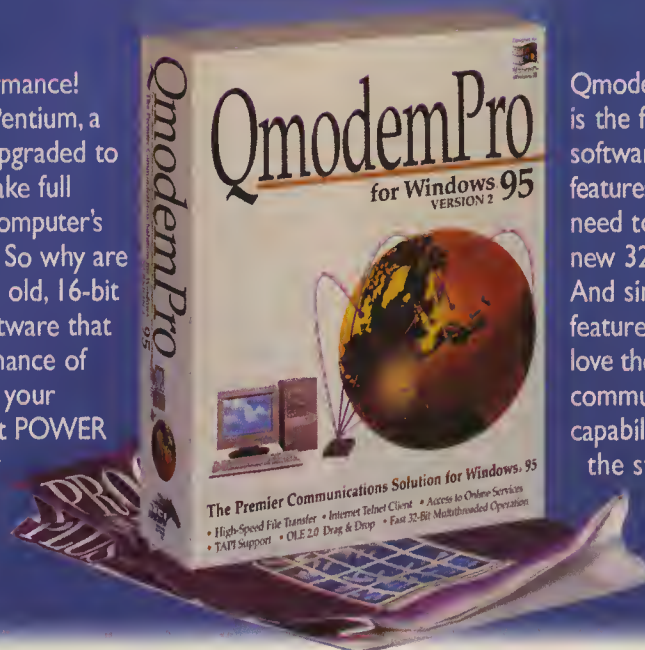
In operation, since the PIPELINE 50 looks like a LAN to your PC, there is no software to run or manage on your PC and it doesn't matter if you run it from a Windows95



From the makers of
Wildcat!

**Paper beats rock.
Rock beats scissors.
Scissors beats paper.
32-bit beats 16-bit.**

You demand performance! You just bought a Pentium, a 28.8 modem, and upgraded to Windows® 95 to take full advantage of your computer's 32-bit architecture. So why are you still settling for old, 16-bit communication software that chokes the performance of Windows 95? Give your computer the 32-bit POWER in QmodemPro for Windows 95.



QmodemPro for Windows 95 is the first communication software that delivers all the features and performance you'll need to get the most from the new 32-bit Windows platform. And since you want dynamic features and ease of use, you'll love the fact that QmodemPro's communication and Internet capabilities go way beyond the standard terminal software included with Windows 95.

QmodemPro Crushes Procomm.

The Premier Communications Solution for Windows® 95

Whether you're connecting to the office, company mainframe or BBS for file and data transfer, get the 32-bit power in QmodemPro to satisfy your "need for speed."

Designed for



Microsoft
Windows 95



Connecting The World™

Available at Software Etc., Babbages, Computer City, CompUSA, Electronics Boutique, Egghead, Best Buy, Fry's, Staples and other software outlets for \$129 or less. Registered Qmodem/QmodemPro customers call for upgrade pricing.

Mustang Software, Inc. • 6200 Lake Ming Road • Bakersfield, CA 93306
Voice 805-873-2500 • Fax 805-873-2599 • BBS 805-873-2400
Internet <http://www.mustang.com>

800-807-2874

© 1995 Mustang Software, Inc. All names are trademarks of their respective companies.

machine or any other operating system or hardware architecture. You simply set up your PC to access the LAN as normal. In our case, our client machine was a laptop. We installed a Xircom Ethernet PCMCIA card and set up our Windows95 network to use TCP/IP, IPX and NETBUIE over this link. This gives us TCP/IP access to the Internet, IPX access to our Novell file servers, and Microsoft network access to our NT server. We're as plugged in as we can possibly get — every bit as much as we are with a machine in the office on the LAN.

Normally, you would connect your PC to a 10BaseT hub device, and simply plug in the PIPELINE50 into one of the hub ports. In our case, our laptop would be the only thing on the home LAN. So we had to use an Ethernet cable with the transmit pair (pins 1 and 2) and receive pair (pins 3 and 6) crossed to connect to the PIPELINE50 unit directly. This is a bit like a null-modem cable in the RS-232 serial world. Conveniently, they include one of these cross-connect Ethernet cables with the unit.

At the office end, we simply connected an ISDN telephone line to the PIPELINE 50 and connected the Ethernet port to an existing 10BaseT hub using a normal 10BaseT cable. The office unit is configured to answer only, while the remote unit we carry with the laptop home is configured to call only. In theory, both units could both originate and answer.

Whenever we access a drive on the Microsoft network, attempt an access of a drive on our Novell network, or use a WINSOCK application like the Netscape Browser, the PIPELINE50 automatically makes the call to our office, where the other PIPELINE 50 answers the call and makes the connection. Those accustomed to 30-45 second waits while a modem dials and negotiates a session will be delighted with ISDN. The total call setup and connection time is under three seconds for this operation — making it truly feasible to make and drop connections at will. If you are in an area that offers flat-rate ISDN pricing, you can easily configure the unit to leave the connection up all the time.

Beyond the 128 kbps physical link, the PIPELINE 50 also compresses data. Like modems, the PIPELINE 50 can theoretically compress data at a 4:1 ratio for connections of up to 512 kbps. Actual results that we typically achieved include 135 kbps performance on dense GIF graphic image files, and over 350 kbps on airy database and text files we tested through the link. This is noticeably faster than the 115 kbps asynchronous links offered by most ISDN terminal adapters that connect to the PC serial port. With regard to speed, the PIPELINE 50 is a screamer. And the move from 28.8 kbps to over 128 kbps crosses some threshold of human perception. We do NOT notice any particular difference between the ISDN connection and our normal office access at T1 speeds, all though there demonstrably is a measurable one. But it LOOKS about the same when accessing the web or even downloading a file. The difference between a 28.8 kbps dial-up and the ISDN connection is perceptually a whole new world.

Physically, the unit is very small at 6 X 8 inches and an inch thick. It uses an Intel i960 RISC processor to do the dirty deeds and features the current version 4.5 software in FLASHRAM. This allows the software to be updated quite easily. The company alludes to a software program that will make configuration much easier — due out this first quarter of 1996. Configuration profiles can be saved and loaded as configuration files which makes things somewhat easier. Further, the telnet access allows an ISP to physically log on to a customer's PIPELINE 50 and fix the configuration for

them quite easily. The PIPELINE 50 also sports the Simple Network Management Protocol (SNMP) — again, it seems to be designed with the ISP or consultant in mind more than end users.

As mentioned, the PIPELINE 50 gives us very fast, transparent access to the Internet through our office LAN. In this sense, we are our own Internet Service Provider. But it also bridges our Novell network. We can access all Novell file server drives and printers quite easily.

The beauty of the unit is that once you do graduate the configuration class, it just works — at impressive speed. I can use the laptop from home to access the office LAN and the Internet. When I bring the laptop to the office, I just plug it into our office LAN with NO configuration changes on the laptop whatsoever and operate from there. The PIPELINE 50 device “extends” the LAN over ISDN in the most transparent fashion we've ever seen. Operation isn't just simple. You don't “operate” it. Once it's configured, and you have used it awhile, you will be convinced that small gray box IS your LAN and the Internet.

Since its operation does not depend on software or operating system on the connected computer, this offers a very interesting option to prospective web sites. Not everyone desiring to operate a web site is a Kodak or Time Magazine. The “low cost” link to the Internet from most Internet Service Providers is a permanent 28.8 kbps link. These are pretty reasonable — typically \$100 per month or so. But 28.8 kbps is a pretty narrow channel for even a small web site. T1 lines start at more like \$1000 per month. For many small web operators, an intermediate step increment would be nice — and ISDN provides it at about \$250 monthly.

With the PIPELINE 50, you could easily set up an ISDN connection with a local Internet service provider and connect a single WindowsNT server machine to it via an Ethernet cable. With data compression, a link in excess of 128 kbps is achieved, and there really isn't any special configuration for the WindowsNT machine. Simply install TCP/IP as a network service on the server and install your web server software. The result is a single machine web site rather complete.

Similarly, we suppose you COULD use the PIPELINE 50 for what it was designed for — connecting small LANs to larger ones. Simply connect the remote PIPELINE 50 to the 10BaseT hub connecting the PC's on the local LAN. For Internet Service Providers and consultants, the PIPELINE 50 could almost qualify as a new career. It is just ideal for connecting small offices to the Internet. And the filtering profiles can be used to control access out to the Internet, AND access IN to the LAN as well. It is a very flexible gateway and though I shudder at the word — essentially can be configured very nearly as a “firewall.”

The PIPELINE 50 features a list price of \$1695. A smaller PIPELINE 25 device features analog ports allowing you to plug in a standard telephone, fax, or modem. It lists at \$895 but IP and IPX routing and the data compression feature are all additional cost options on the PIPELINE 25.

For Internet Service Providers, the company has larger rack mount units including the PIPELINE 400, the MAX, and the MAX 4000. Some very large ISPs have centered on this equipment as the heart of their Internet services including UUNET, internetMCI, and PacBell. The newest entry is the MAX 1800 which sports eight units in a single rack mount.

Each unit can answer both ISDN and 28.8 kbps V.34 analog modem calls. We'll take a closer look at the MAX 1800 in a future issue.

The bottom line is that the configuration and documentation on the PIPELINE 50 product is poor. The technical support is, on the other hand, correspondingly excellent. Ascend actually offers classes to Internet Service Providers to train them to configure this item. Even at the list price of \$1695, considering the fact that it completely eliminates both a router and a modem, it's a money saver. But the performance and functionality of this device make it one of the most exciting hardware entries we've seen for Internet connectivity. And finally, the company seems to have a bit of a head start in identifying Internet Service Providers as the way to leverage this device into wide use.

Ascend itself has been doing quite well as a company. Third quarter 1995 gross sales of \$40 million were quite a bit up from the \$10 million for the same quarter the previous year. Earnings at \$7.3 million were also impressive — \$0.25 per share. It went public in May of 1994 at \$13, sported a two for one split last fall and still currently trades at around \$70 under NASDAQ symbol **ASND**. With a strong focus on sales to Internet Service Providers, and our vision of a future with a LOT of Internet Service Providers, we think it's a good bet there as well. Ascend Communications, 1275 Harbor Bay Parkway, Alameda, CA 94502; (510)769-6001 voice; (510)814-2300 fax; <mailto:info@ascend.com>; <http://www.ascend.com>. ♦

BLAST INTO THE FUTURE!

With **Game Connection** your customers can warp to other worlds via multi-player Descent, DOOM, DOOM II, Heretic, Spectre VR, Warpath, Empire Deluxe and Global Conquest. And support for even more stellar games is on the way.

Game servers for under \$1,000 include all necessary software for an 8-line server. Fourteen to 128+ line servers are also available.

Worldgroup™, **The Major BBS®**, and **Galacticomm** software and hardware are also available at discounted prices. Worldgroup, using the new client/server technology, provides a full Windows GUI and offers customers a point-and-click interface to your system.

Available for Worldgroup and The Major BBS from Sirius Software: MailLink, Match Maker, Employment Service, Mine Field II, Remote Console, Chat On Demand, VisaMan™, OmniMail™, Tradewars 2002 and many more.



Call today for your free catalog:

Sirius Software, Inc.	Voice	(307) 237-0065
1049 Cardiff Street	BBS	(307) 237-2112
Casper, WY 82609	Fax	(307) 265-4452





DR. BOB

by Bob Rankin

AMAZON.COM – BIGGEST BOOKSTORE ON THE WEB

A million books for sale, but bring your own couch!

When **Amazon.com** opened their virtual doors last October, offering over 1,000,000 discounted book titles in their online store, there had to be some shivers going up the corporate spine of Barnes & Noble.

But there was also a cheer going up in cyberspace, as book buyers from over 45 countries enthusiastically flocked to what became the world's largest bookseller almost overnight.

Former Wall Street wonderboy Jeff Bezos, Amazon.com's founder and president, didn't open an online bookstore just because it seemed like a cool thing to do. "We determined that the Internet and the Web in particular had reached critical mass," enabling large-scale interactive retailing.

So the question then was, "What's the first and best product to try and sell on the Internet?" Bezos made a list of about 20 possibilities and settled on books primarily because there were so many — over a million possible items just from English language titles alone.



A store that couldn't exist in the real world

This enabled the building of a store that couldn't exist in the real world. A physical bookstore as large as Amazon.com would be impossible to support, because no metropolitan area is large enough to support such a mammoth store. A paper catalog of all of Amazon.com's titles would be the size of 7 New York City phone books.

A typical mall bookstore stocks about 30,000 titles, and a superstore such as Barnes & Nobles may offer 120,000. So Amazon.com's "inventory" of over a million titles is unique indeed.

TURNING THINGS UPSIDE DOWN

Bezos, who sports a degree in Computer Science from Princeton, worked on Wall Street at D.E. Shaw & Co., moving up to the position of Senior Vice President at the age of 28. He points to the revolutionary "inverted

trading model" at Shaw where "programmers were making the trading decisions and brokers were just carrying out their instructions" as inspiration for the organization of his new online venture.



Jeff Bezos, 31, Founder of Amazon.com

In late 1994, Bezos assembled a team of programmers from Silicon valley, then spent several months writing a business plan and getting it into action. After developing partnerships with publishing houses and credit card companies, Amazon.com entered beta test in early 1995 and went live last Fall.

Interest from publishers both large and small has been "phenomenal," with so many publishers anxious to get their book information online that submissions are on a "first-come, first-served" basis at this time.

It seems that customers are eating up the combination of selection, service and convenience that Amazon.com offers them. The company has yet to take out any paid advertising, relying on the word-of-mouth buzz online to bring in the bibliophiles.

Amazon.com doesn't actually stock a million book titles in their warehouse — only the 50,000 or so best

Bob Rankin, known as "Doctor Bob" in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of *The Internet TourBus* and author of *"Accessing The Internet By E-Mail"*, which has circulated widely on the Internet, and is available in 15 languages. Send e-mail to BobRankin@MHV.net or visit him on the web at <http://csbh.mhv.net/~bobrankin>

selling items. But with electronic ordering they can get most other items from the publisher or wholesaler in a day.

CUSTOMER SERVICE IS KEY

Books are then shipped to customers directly from Amazon.com's facility. "No drop-shipping," says Bezos. "There's no way you can maintain quality control with 20,000 different publishers drop shipping to your customers. When a customer calls and says 'Where's my order?' and all you can say is 'I don't know' — that's not a good thing."

*"On the Net, ...
unhappy customers don't
tell 6 friends, they tell
6000."*

The key to online selling, Bezos says, is excellent customer service. "It's an incredibly important success factor for selling on the Net, because unhappy customers don't tell 6 friends, they tell 6000. The Internet enables a free flow of information, which is great, but it makes it essential for an online retailer to offer the best possible service."

As to their relationship with publishing houses, Bezos says "from a publisher's point of view, we're just a customer — another channel for them to distribute their books — especially for small publishers, we're a very important channel for them."

Given the number of titles that real-world bookstores are able to stock, it can be really hard to get your book into consumer's hands if you're not in the top 100,000 titles. But this is one of the problems that Amazon.com helps to solve, by virtue of their... well, virtuality. They even accept books from self-publishers with 1 or 2 books.

FREE BOOK-WATCH SERVICE

Whether it's a tip of the hat to the Internet give-and-ye-shall-receive economy or just a bit of smart marketing, the company offers a freebie they call **EYES** — a personal notification service that allows readers to describe their interests in a given subject or author. EYES then follows up with automatic e-mail notification when new books that fit the bill become available. "People love it," Bezos notes. "There are people

who are really into a certain author, or maybe they're a kayaking nut. They can use EYES to make sure they don't miss a beat."

So is there any reason why the wired reader should go to Barnes & Noble anymore? "I don't think online bookstores will ever replace physical bookstores," Amazon's chief opines, "because physical bookstores are nice places to be. People love to spend half a day in a bookstore, to smell and touch the books. That's one of our main challenges — to make the book browsing experience every bit as engaging and fun as it is in a real book store."

SAMPLE EXCERPTS ONLINE

But can you crack open a book at Amazon.com and have a peek inside? "Yes," says Bezos, "but only about 50,000 titles have info beyond the bare bones bibliographic data right now. This is clearly one of the things we have to do to make the online book browsing experience enjoyable." Bezos also says that there is an automated "self-interview" that authors can use to attach useful information to their books in the online catalog.

Surprisingly enough, most people use the online web form to pay for their book purchases by credit card. Apparently the use of Netscape's Commerce server is enough to ease consumer fears of online transactions, but the faint of heart can still mail a check, call the 800 number or even fax their credit card number to complete the sale.

Customers needn't worry about a repeat performance of the Mitnick/Netcom debacle at Amazon.com, though. They use an offline system they refer to as CC Motel — "credit cards get in but they can't get out," according to Bezos. "We've gotten tremendous positive feedback," he says.

That could be because they were prepared for success, on both the hardware & software fronts. The world's largest bookstore operates on a network of hefty Sun servers, which run Oracle database software and a good deal of proprietary C and C++ code developed in house.

SLEEP ON IT

Bezos is tight-lipped about the financial aspects of the company but he did say the venture, funded by private investors, is "exceeding our expecta-

tions." Not surprising, after talking to this 31-year old who sometimes camps out in the office in a sleeping bag when he's too tired to drive home. But spending long hours working isn't a sacrifice for Bezos. "Computers and business, individually and jointly, are two of the coolest things in the universe."

The young man with a passion to become the retail king of the Web does have a life, though. "When I can, I hike, and I've taken a couple of interesting treks, including one to the base of Angel Falls in Venezuela. These falls are as tall as the Empire State Building, and the setting is straight out of a Spielberg film, including the lighting effects."



Bezos likes challenges like Angel Falls & Business

"And Before I die, I'd like to winter in Antarctica, hunt for dinosaur fossils in the Gobi desert, and have a family reunion in a plush, zero-G, orbital amusement park."

Bezos lives near Seattle, Washington, with his wife MacKenzie and a yellow lab named Kamala, who is named after the "metamorph" on a Star Trek TNG episode titled "The Perfect Mate." I wonder if they read much. ♦

CONNECTING WITH AMAZON.COM

Amazon.com Books
2710 First Avenue South
Seattle, WA 98134
(206)622-2335 voice
(206)622-2405 fax
<http://www.amazon.com>
<mailto:info@amazon.com>

DIGEX - From Zero to 30,000 Square Feet

Doug Humphrey started Digital Express (DIGEX) in the basement of his house in 1991 with "back-pocket" funding, just like lots of other guys. But unlike lots of other guys, Humphrey has succeeded in building his dream into a multi-million dollar company.

The secret of his success? Humphrey, who some describe as a visionary and pioneer, says it was "lots of late nights, a group of dedicated workers, and those improbable fiber cables." But late nights don't necessarily translate into big bucks. Humphrey's commitment to excellent customer service and his willingness to invest in technology have most certainly played a role as well.

But then again, maybe it was the chop suey. When the telephone company told him they just couldn't install any more lines into his home, Humphrey moved DIGEX into a small office in a local shopping center — upstairs from a Chinese restaurant. "It was a great place for our first office," Humphrey says. "You've got to have Chinese food to write code."

In March of last year, Humphrey had to switch from take-out to delivery because of the company's relocation to new 30,000 square-foot digs in what was formerly the home of the National Rifle Association. Along with that expansion came a huge increase in revenues, too. The company expects that final 1995 numbers will show a quadrupling of the **\$2 million** figure realized in 1994.

The explosive growth of DIGEX caught the eye of venture capital firm Grotech Capital Group, enabling the move and an increase in staff from 15 to over 100 people during 1995. With such a rapid expansion, Humphrey found it necessary to acquire some management expertise in the person of Clyde Heintzelman, a former Bell Atlantic executive.

"Getting that (money) from Grotech was a culture shock," Humphrey says. "Suddenly we were a real company. But it makes it easier to do what we want to do because we were always financially constrained."

Unlike many who are jumping on the ISP bandwagon, Humphrey has been passing packets for quite a while. As a high school student in 1977, he was using ARPANet, the forerunner of today's Internet. And during his days as a physics major at the University of Maryland, he seized the opportunity to work for ITT and GTE in order to advance his network-

ing skills. Before launching DIGEX, Humphrey worked for Tandem Computers Inc., installing computer networks for the New York Stock Exchange, the Secret Service and other high-profile clients.

Today, Humphrey is CEO of a fast-growing company that is Maryland's oldest and largest Internet provider, but he is still close to the technology. If you take a drive along the back roads of Prince George County, Humphrey will point out the orange-tagged fiber optic cables that connect him and his customers to the ether.

DIGEX places a premium on building a local staff of experienced sales and service people. According to Humphrey, it's important to have local professionals available to do business on a person-to-person basis. That's a nice touch in the often faceless world of online communications.

Although they provide dial-up service to individuals, DIGEX is attracting some big name customers with a focus on business services. Some of DIGEX's clients include the Securities and Exchange Commission, University of Maryland, The World Bank, C-SPAN and the National Organization of Women.

DIGEX offers businesses frame relay and leased lines from 56Kb to T1 (1.5 Mb), allowing them to connect directly to DIGEX's high-speed T3 Internet backbone. They also provide dedicated Internet servers (one per customer to enhance security) on DIGEX's premises to handle Web server, FTP or other specialized application needs.

In addition to serving the greater Maryland and Washington, DC areas, DIGEX recently took on some far-flung challenges in connecting both the tiny Caribbean island of Barbados and the former Soviet Republic of Georgia to the Net. In the latter case, DIGEX flew two technicians to the Georgian capital of Tbilisi to install a 64Kb satellite circuit and network operations center.

This will make the informational resources of the Internet available to Georgian legislators as they craft a new constitution and draft legislation. A noble gesture — one just hopes they don't stumble into USENET while searching for information on privatization and legal reform! ♦



***The Secret of Success:
"You've got to have Chinese
food to write code."***

DIGEX CONTACT INFORMATION

Digital Express Group, Inc.
6800 Virginia Manor Rd.
Beltsville, MD 20705

(800)99DIGEX or (301) 847-5000 voice
mailto:sales@digex.net
http://www.digex.net

NEED EXPERT BBS HELP?

Unmatched Experience

We are a full-service, professional company that specializes in telecommunications hardware and software, Bulletin Board Systems and related applications. For over twelve years, we've been setting up bulletin boards for customers world-wide. Our experience is proven by the awards our 64-line BBS has won over the past twelve years, including winning 13th place in the Boardwatch Top 100 Contest! We know what it takes to run a successful BBS, and we'll share our proven experience with you!

Turnkey Solutions

In addition to selling the software and hardware components necessary to let you put your own system online, we have the ability to provide our customers with total turn-key systems. We have several programmers available to transform your ideas into realities quickly and at very reasonable rates. Call us for a free "info pack."

The VAR Difference

Because we are a "VAR" (Value Added Reseller), we offer service before and after the sale. Here's an example: What happens if your DigiBoard has a problem after you've bought it? If you buy it from someone else, you have to ship it back to the repair center to get it fixed. Buy it from INDEX, and for the first year you own your board, if you experience a problem, we will send a replacement to you via next-day air, at no charge to you.

It's that added value that makes the difference. Not the price war that these "one-man" shops are running. We are able to provide you with a truly economical solution to your needs, without sacrificing quality. Call us. Just talking to us on the phone, you'll hear the difference.

Helping Customers Since 1983!

No other company in this industry has the skills and experience that we have. Nobody! We're the proven industry leader for over twelve years. When you need some advice, why go to the "new kid on the block?" We'll be there for you before and after the sale. Call us today and let us help put you online!

Rodney A. Aloia
President

Maximum Assistance for Minimum Cost

Is your company about to invest time and money in a BBS? Would you like some "one-on-one" professional advice from the industry experts first? Here's your chance to invest in the future of your BBS and gain useful decision making info at the same time. We'll schedule time with you to discuss, at length, your needs. Our consulting appointments are available in 30 or 60-minute sessions, via phone or in-person, your place or ours. We even have some weekend and evening appointments available! You are going to make the purchase of your system soon, so why not put down as little as \$25.00 now towards your future purchase? Give us a call for more information today!



BananaCom Custom
#1 Reseller

Standard Customonly \$195.00



Gold DigiVAR



Durand Communications Network
Value Added Reseller

GALACTICOMM

Ambassador Dealer



Authorized Reseller of TBBS
Software and Accessories



Certified System Integrator
of eSoft' IPAD



Call To Order! 770-924-8667

The INDEX System™

6030 E. Alabama Road, Suite 114 • Woodstock, Georgia 30188

(770) 924-8667 voice
(770) 924-8472 BBS

Browse our Web Page:
www.index.com

Telnet to index.com

Our Services:

- Internet Connectivity
- Turnkey Internet & BBS'es
- BBS "Service Bureau"
- Professional Consulting
- On-Site Installation
- Configuration Assistance
- Training and Support
- Custom Programming
- Remote BBS Support



Rodney A. Aloia, President

RUSSIA AND THE INTERNET

by Josh Zander

To a considerable extent, using the Internet in Russia can be likened to one of those classic "bad news, good news" jokes: the bad news is access to the Internet in Russia can be limited, difficult and expensive; the good news is that the situation is rapidly improving.

In the U.S., millions of people use the Internet every day for research, business, e-mail and entertainment. Indeed, in the last year, the term Internet itself has become a buzzword featured prominently in daily newspapers, popular magazines, and on television. In Russia, where only a small fraction of the population owns or has access to a computer, and where only 500,000 computers were sold last year, the Internet remains unreachable by, and largely unknown to, the vast majority of people. In many areas of the country, access to online services remains all but impossible, except by costly and often unreliable long-distance telephone lines.

The number of subscribers to online services in Russia, including foreign companies and individuals, is less than 10% of that in the U.S. However, despite impediments to growth such as the poor telephone infrastructure, the expense of providing services, and the relatively high cost of computers and peripherals, data indicate that the number of subscribers is increasing by around 5% per month. Existing Internet service providers are expanding, and new providers are being created at a fairly rapid pace.

In addition, American and European online services are able to provide local telephone numbers in a number of Russian cities, although access is usually slow and prices are more expensive than their domestic services.

If your business activities take you to Russia or if you need to communicate with colleagues or business associates in Russia, access to the Internet and its various components and services can be of vital importance. While not always the case, using e-mail can usually be an easier, less time-consuming, and much less expensive means of communication between Russia and the U.S. than telephone or fax, and also avoids the considerable time differential.

RUSSIAN SERVICE PROVIDERS

In many major Russian cities, especially Moscow, St. Petersburg and others concentrated in the eastern third of the country, the user has a choice of Internet Service Providers (ISPs). In the middle third of the country, including western Siberia, the number of ISPs is much more limited, and are located in a handful of cities, while in the eastern third, ISPs are located only in Khabarovsk and Vladivostok.

The number of Russian ISPs is growing, and it is not possible to provide a complete or comprehensive listing within the context of this article. Among the principle ISPs are the following:

RELCOM With more than 200,000 subscribers, Relcom (an acronym for Reliable Communications) is the country's largest, offering e-mail and TCP/IP services, but not access to the World Wide Web. It does provide points of presence in many cities other than Moscow. Relcom is part of the EUnet, and does provide services in both English and Russian languages. It also maintains a group of USENET news groups, which can be accessed by any Internet user under the Relcom heading. For more information, contact A/O Relcom, ul. Raspletina 4, building 1, Moscow 123060, Russia. Telephone: **+7-095-194-25-40**. Fax: **+7-095-194-33-28**. <mailto:office@office.relcom.msk.su>; <http://www.kiae.su/>

SOVAM TELEPORT Established in 1986 as a US-Russian joint venture, SOVAM is one of the largest ISPs in Russia, and is able to provide e-mail and full access to the Internet in points of presence across the country. Two months ago, SOVAM introduced a new service called Russia On Line, which aims to provide Internet access for the mass user. For more information, contact SOVAM Teleport, ul. Nezhdanova 2A, Moscow 103009, Russia. Telephone **+7-095-299-34-66**. Fax: **+7-095-299-41-21**. <mailto:support@sovam.su>. <http://www.sovam.com>

GLASNET GlasNet is a private, non-profit telecommunications network, the first to be established in the former Soviet Union. Founded in 1991, the organization's goal is to provide simple and inexpensive information exchange between diverse groups within the former Soviet Union, and it now has more than 2,000 subscribers. Its charges are entirely in rubles. GlasNet provides a full range of Internet services, including, e-mail, ftp, gopher and world-wide web. For more information, contact GlasNet User Support, ul. Sadovaya- Chernogryazskaya 4, room 16a, Moscow 107078, Russia. Telephone: **+7-095-207-07-04**. Fax: **+7-095-207-08-89**. <mailto:support@glas.apc.org>; <http://www.glas.apc.org>

ELVIS+ Elvis+ was founded in 1991 to interchange information with Sun Microsystems, and it now offers a variety of services in English and in Russian. It provides e-mail, world wide web access, Internet fax, and UUCP. For more information, contact Elvis+, Tsentralny Prospekt 11, Moscow 103460, Russia. Telephone: **+7-095-531-46-33**. Fax: **+7-095-531-24-03**. <mailto:sasha@elvis.msk.su>; <http://www/elvis.msk.su>

GEONET GeoNet, a Russian-German joint venture, offers a range of customer services, including

Internet access. GeoNet features specialized databases and bulletin boards, as well as e-mail, Internet fax, and world wide web access. It is reported that its services will be extensively upgraded by the end of 1995. For more information, contact GeoExpress, Leninsky Prospect 42, Moscow 117119, Russia. Telephone: +7-095-938-70-12. Fax: +7-095-938-81-89. <mailto:n.romanov@geod.genet.de>

In addition to these ISPs, there are local providers, such as Nevalink in St. Petersburg and Tsaritsyn in Volgograd, which offer a range of Internet services in their cities.

ONLINE SERVICES

The Western traveler or business person who wants to stay in touch with home or office, but who does not want to sign up with a Russian ISP, can access some American online services, such as CompuServe, America Online and SprintNet.

However, the user should be aware that access speeds may be significantly less in Russia than in the U.S., that surcharges may apply, and that connections may only be possible through other networks, such as Tymnet or Infonet. As a result, connect-time charges may be significantly more expensive than they would be at home.

COMPUSERVE CompuServe, the largest American online service, has local access numbers in more than 40 Russian cities, ranging from Moscow and St. Petersburg to Vladivostok. Access is provided through SprintNet, which adds a surcharge to the connect-time rate. Although Compuserve itself does not charge any more for connections than it does in the U.S., the maximum connection speed is 2400 baud, which will greatly increase the time required for any given access, particularly if Windows-based software is used. For more information, contact Compuserve. Telephone (800)848-8990 or, outside the U.S., +(614)457-8650.

AMERICA ONLINE Like CompuServe, American Online offers local access numbers in several Russian cities. However, AOL charges a flat 20 cents per minute for connect time. Additional charges will be applied by SprintNet or Tymnet if AOL is accessed through these networks. For more information, contact American Online at (800)827-6364 or, outside the U.S., +(703)893- 6288.

SPRINTNET SprintNet also offers its subscribers Internet access in a variety of Russian cities. In addition to e-mail and other Internet services, SprintNet also provides telex and fax, video conferencing and other communications facilities. For more information, contact SprintNet at (800)877-5045, extension 5.

Delphi and BIX, as well as other American ISPs may also be accessed from Russia via SprintNet and Tymnet. You will need to contact your ISP to find out if this service is available and, if so, how it is accomplished.

MAKING THE CONNECTION

The vagaries of Russian telephone systems can often make connections difficult, particularly when high speed modems (14400 and 28800) are being used. While systems in major cities have been, and are being upgraded, the poor quality of lines may result in degradation or loss of data. If you have become used to American standards of connection quality and ease of access, you must learn patience when in Russia, or else you will become eternally frustrated.

Because Russian telephone jacks are different from the standard American RJ-11 connector, you will need some sort of adapter to make the physical connection between your modem and the telephone line. Many electronic and computer stores sell kits of adapters, ranging from \$20 to \$150. **Russian Information Services**, in Montpelier, Vermont, can provide a Russian telephone adapter, specifically made to connect American modems and Russian telephone lines, for \$22.50. They can be contacted at (800)639-4301.

You should be familiar with how to connect your computer's modem to the telephone jack with these adapters before you leave for Russia. Russian computer experts have become adept at making unorthodox, if workable, connection solutions, if all else fails.

WORLD WIDE WEB SITES

The World Wide Web (WWW) can provide much useful information about Russia, which can be accessed without leaving your home or office. Exploring these Russian and Russian-oriented websites can help you locate valuable business, economic, cultural and other data with relative ease.

Since the Web is the fastest-growing component of the Internet, it is possible

to provide only a few such locations. Each will lead you to others. Happy surfing! ♦

BISNIS Online:

<http://www.itaiep.doc.gov/bisnis/bisnis.html>

Moscow State University:

<http://www.rector.msu.su/>

Okno Group Home Page

<http://www.msen.com/~okno/>

Russia-NIS Home Page

<http://www.clark.net/pub/global/russia.html>

Russian Economy Resource Center

<http://www.eskimo.com/~bwest/rrerc.html>

Russian Exchange Home Page

<http://www.fe.msk.ru/infomarket/rtsb/ewelcome.html>

Russian Trade Connections

<http://www.zpub.com/rtc/>

St.Petersburg Web

<http://www.spb.su/>

Russia-Online Home Page

<http://www.online.ru/>

SVNW - Russian & CIS News

<http://www.rs.ch/www/rs/ds/svnw.html>

InterFax News Agency

<http://www.aescon.com/interfax/index.htm>

Josh Zander is editor-in-chief of "Russian Business News" and co-founder of Russian Business Ventures. He can be reached at (415)492-3382 voice; (415)472-5709 fax or <mailto:onlinejzander@ix.netcom.com>





COMMUNICATIONS NETWORK

Partnershi

Imagine...

...a platform with no limits. A platform that takes you beyond the traditional features of a bulletin board system and into the world of interactive client/server applications. Imagine a platform so powerful that thousands of users can access it simultaneously via modem, network, or the Internet. Imagine a platform that supports existing Windows® development tools, and also gives you access to some of the most popular and powerful databases available today.

If you have been looking for the ultimate platform to provide a graphical online service, your search is over. **MINDWIRE NT** is a true 32 bit Windows NT™ based communications platform that allows you to put Windows client/server applications on the Internet in addition to hosting a Web site. **MINDWIRE NT** is designed for speed, power and connectivity and includes complete login security and customizable features. **MINDWIRE NT** is everything you need to setup a virtual community on the Internet.

Developers Love MINDWIRE NT

MINDWIRE NT is the developer's paradise! As a developer, you will appreciate the no limits architecture behind **MINDWIRE NT**. Using the **MINDWIRE** Developers Kit and Database APIs, you can provide access to powerful SQL databases through ODBC, OLE and several Windows® programming tools like Visual Basic. Begin developing your dream service today.

The Application You Want

MINDWIRE NT is the ultimate platform for interactive multimedia applications. Out of the box, **MINDWIRE NT** comes with several interactive groupware applications such as Internet E-Mail, Messaging Forums, Live Chat and more. To help you get online fast, Durand has created an entire warehouse of graphical applications such as Catalogs Plus, Estate, QuickPress, Classified Ads, Calendar, Chess, News Flash and more.

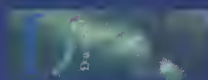
The Database You Need

For those who want to put a photograph database online, Durand has several database solutions. Our universal database browser works with any ODBC compliant database engine for Windows® such as Microsoft Access, FoxPro, dBASE, Sybase SQL, or Microsoft SQL Server. No matter what your need, **MINDWIRE NT** can deliver. If your mind can conceive it, **MINDWIRE NT** can create it!

*"MindWire is
your fast track to
success and is
quickly being
recognized as the
most scaleable
and customizable
online services
platform ever
developed."*

MINDWIRE NT™

MIDRE DURAND
Chief Executive Officer

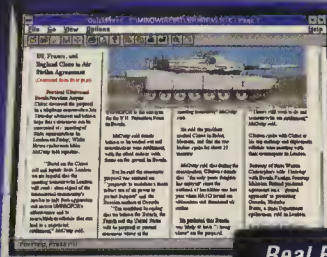


Don't risk your future with dead-end software. The future is here, and the future is **MINDWIRE NT**. Call us today! **1-805-961-8700.**

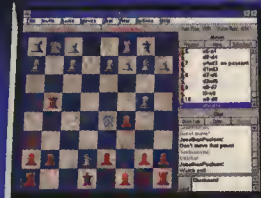
ps for Profit:

Turnkey Solutions for Doing Business Online

Online Publications



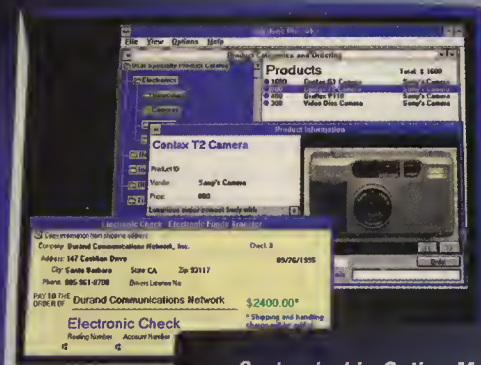
Interactive Games



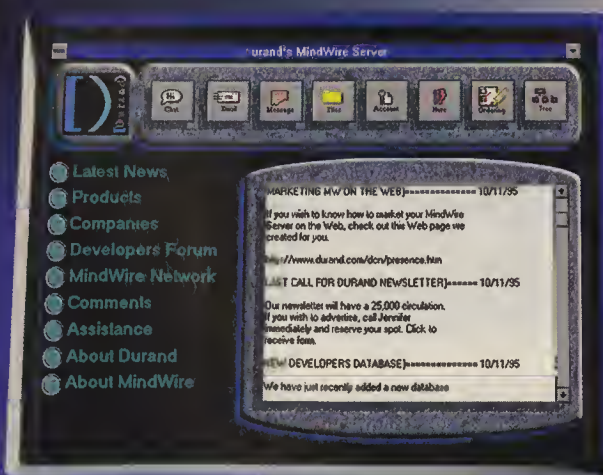
Real Estate MLS Systems



Product Catalogs



Customizable Online Menus



Windows NT™ Service
Free Customizable Client Software
Multimedia Support
Internet E-Mail
Live Chat With Photos
Web Server Software
Commercial Database Access
Internet Developer's Toolkit
Automatic Software Distribution
Complete Audit & Billing System

MIND
WIRE
SERVER
INTERNET

Durand
COMMUNICATIONS NETWORK

Think it Real.™



SPEAKING JAVANESE by Jason Osgood

WHAT EXACTLY IS JAVA?

Java is getting a lot of media attention. Unfortunately, I'm not satisfied that any of the authors "get it." Since there's a need for a better understanding, I've decided to take two steps back and spend some time explaining what Java is and isn't. I think this worthwhile, since Java will fundamentally change the way we use and view the Internet.

(I promise to resume the coverage of WebBBS development in the next column. Meanwhile, if you're interested in helping me test the client software, please drop me a note.)

WHAT IS JAVA?

My grasp of Java and what I can do with it gelled nicely as a result of the Java Conference. The following is my attempt to explain it as best as I know it.

Java is actually a suite of technologies including a programming language, a virtual machine (specification and implementation), an application programming interface (API), and a Web browser (called HotJava). Independently, each of these developments would be significant. Taken together, they pave the way to the future of software.

THE JAVA LANGUAGE

Five years ago, Sun needed a programming language for creating consumer products. This requires a language that is significantly less prone to bugs than C. James Gosling started by tailoring C++ to fit the need. At some point, he figured out that patching C++ wasn't the answer and decided to start over by designing a language from the ground up.

Java takes advantage of proven features in other languages. The syntax is largely borrowed from C, so most programmers will feel at home. Additional features of Java are *classes* (like C++) but with single inheritance, *interfaces* (like Objective-C) with multiple inheritance, *packages* (like Modula), *concurrency* (like Mesa) which supports multithreading and synchronization, *exception handling* (like Modula-3), *dynamic linking* and *automatic storage management* (like Lisp).

Thankfully, many of the pitfalls of C were eliminated. Strings are handled like strings and not like character arrays. Arrays are accessed by reference instead

of pointers and have automatic bounds checking. There's no more explicit memory allocation and the like, which is the source of many hard to find bugs. Java's dynamic allocation and garbage collection run as background tasks, so there's no more worries.

All of the improvements specifically target the construction phases of software creation. By significantly reducing construction and maintenance costs, Java ushers in a new era of "consumer" software. Since nearly all consumer products from razors to microwaves now have "smarts" built-in, this is a welcome development.

THE JAVA VIRTUAL MACHINE

Java code is platform independent. This means the same compiled code will run on any platform that has a Java interpreter. This interpreter conforms to the Java Virtual Machine specification. It can be likened to an emulator that takes compiled Java programs and translates the bytecodes to machine specific machine code on the fly. As of this writing, the Java interpreter is being ported to every imaginable platform.

At first blush, you'd think interpreting code on the fly would be quite slow. However, the idea has been proven to be sufficiently fast with the object oriented operating system *Taos*. Furthermore, Sun is developing internally and sponsoring academic research into "just in time" compiling, advanced dynamic memory management (a.k.a. garbage collection) and incorporating traditional compiler optimizations in the Java interpreter. I'm comfortable with Sun's prediction that interpreted Java code will eventually execute as fast or faster than compiled C++ code.

The Java Virtual Machine specification is also where many of the low-level security issues are addressed.

Code is scanned for validity before being executed. This ensures that a crafty Java applet can't violate the integrity of the system.

THE JAVA API

The Java API is a library of classes that make doing things on the Internet a breeze. The API has

complete high-level support for all major Internet protocols, like HTTP, NNTP, FTP, etc. There's also access to all the lower level functions for writing your own protocols.

It's true that Java's API supports a very basic user interface. This is more a factor of time than ability. I fully expect to see all of the standard widgets found

"The Java API will be to the Internet what the Win16 and Win32 APIs are to the desktop."

Jason Osgood was a sysop and BBS network administrator for 4 years. Like all Seattle natives, he enjoys grunge rock, rain and fine coffee. Jason's life-time goal is to make technology more useable and useful, particularly in the field of computer aided design software. He volunteers time to both a local conservationist group and a local school district's technology education initiative. Jason pays the rent doing contract programming and user interface design work. You can e-mail Jason at <mailto:josgood@seanet.com>

in Windows and the Mac implemented in Java in the near future. Even more significantly, Sun is encouraging the multimedia and 3D graphics communities to pin down common specifications so that they can be incorporated into the Java API.

The Java API will be to the Internet what the Win16 and Win32 APIs are to the desktop. There's nothing preventing the incorporation of equivalent functionality into Win32 or Microsoft's Fountain Class (MFC) library. But the Java API is here today and is comparatively easier to use.

THE HOTJAVA BROWSER

The HotJava browser is getting attention because it can run Java applets, otherwise known as executable content. This alone is worthy of praise. But less realized is that HotJava is a harbinger of what software product architectures of the future will look like.

References to Java applets are put into an HTML document, just like a reference to an image file. When HotJava encounters one of these, it downloads the applet and then executes it. Applets have full access to the complete Java API and all of HotJava's functionality. This keeps applet sizes quite small and makes application development relatively easy.

"Applets have full access to the Java API and all of HotJava's functionality."

The architecture of HotJava is even cooler. HotJava natively supports installable protocol and content handlers. This means that if you want to support a new Internet protocol, such as HTTP-NG (for "next generation"), or image type, you just include your code in the search path and you're set.

Lastly, as a programmer you can "hook" any feature in HotJava and have your code run instead of a native HotJava function. To hook a feature, simply substitute your Java code (class, or groups of classes called packages) in place of the stock HotJava code. Or better yet, subclass any standard HotJava classes and rewrite just the methods that you want to change. It's significant to note that HotJava is both written and customizable with

Java. Other software products have macro languages that are different from the implementation language.

HotJava in essence becomes the operating platform. Imagining word processors, databases, spreadsheets and the like with similar architectures is not a stretch. Software of the future will be radically different from today's offerings; it'll be like HotJava.

BATTLE FOR THE INTERNET

The media has been imagining a battle forming between Netscape and Microsoft for dominance of the Internet. The story goes that Netscape is trying to fashion a network operating system and be to the Internet what Microsoft was to the desktop.

I'm here to tell you the media has gotten it completely wrong.

Netscape has great products, this is true. But all they offer is applications built on top of communication protocols. The most Netscape can do is implement the next generation of protocols before everyone else and support more types of plug ins.

"Sun waltzed away with the Internet before Microsoft even realized there was a fight."

The real story is that Sun waltzed away with the Internet before Microsoft even realized there was a fight. While it's true that Microsoft has the Blackbird project in the wings, the simple truth is that Sun's Java suite of technologies has at least a 1 year head start in the market and the virtue of being an open system. Big players like Oracle, Borland, Netscape, Metrowerks and hundreds of would-be software giants sensing an opportunity have bitten into Java hook, line and sinker. In the software market, "mindshare" is everything. And thus far Microsoft has none.

Microsoft was certainly on the right track. Blackbird is analogous to HotJava and a Java enabled web server (like Netscape has announced) together. Blackbird is written in C++ and MFC, utilizes OLE components and uses VisualBASIC as "glue" for the application developer. HotJava is written in Java, utilizes applets today

and objects distributed in the future via CORBA (common object resource broker architecture, an industry standard), and uses Java and industry standard HTML as the "glue."

But even if Blackbird were available today, which it isn't, Sun has the drop on Microsoft because the Java language and API are better development environments than anything Microsoft has available. If nothing else, developers using Java will have the cost advantage over C++ developers.

Is this the end of Microsoft? Hardly. There's a huge difference between toppling an opponent on their own turf and beating them to the punch in an emerging market. Microsoft will continue to prosper in their applications and operating systems markets. Eventually, Sun's dominance of the upcoming consumer and executable content software markets may spill over onto Microsoft's turf. But by that time, I expect Microsoft will have technologies that can compete with the Java suite.

THE FUTURE FOR JAVA

Sun and Borland have both announced they will create "visual" development environments for Java. Oracle has announced support for Java, probably in their CASE development and business objects tools. MacroMedia has announced that all of their future multimedia products for the Internet will use Java.

Sun has also created network enterprise objects (NEO). This technology will likely be implemented as extensions to the Java API (thus far called "JOE"). This will permit easy object based transactions (sending objects back and forth over the net) and object storage (called persistence, like an object database).

It may take up to a year for these products to hit the market. Forward thinkers are learning about Java now and will be in a position to do serious development when they arrive. I predict that Java will be firmly established and a big money maker for everyone involved in under two years.

I encourage everyone to go out and get smart on object-oriented technologies quick like, even if you don't intend to program. The world is changing fast and furiously. It's better to be informed than run over.

THE JAVA CONFERENCE

Sun's Java Conference on Nov. 8th, held at their new campus in Menlo Park, CA was impressive in a number of ways. With two weeks' notice, 1,400 people attended, with rumors of another 1,000 on a waiting list. Talk about wired! The temporary facilities, which were used for Sun's UltraSparc rollout the day before, were amazing. The whole shebang is going to be packed up and used for as a traveling road show, just like the circus.

Maybe it was just the sunny weather, but I haven't been this enthusiastic about a new technology since Autodesk's cyberspace and Xanadu initiatives in 1989 and Apple's Lisa computer before that. Ahem! With those previous "successes" in mind, I'm trying to keep my emotions in check. Nonetheless, the show was impressive. If I was keenly interested in Java before the conference, now I'm an evangelist.

Sun brought out the Big Guns for this conference. The morning started out with presentations. **Eric Schmit** (chief technology officer) and **Arthur van Hoff** (engineer) presented an overview of the Internet and Java. **Bill Joy** (co-founder of Sun and VP of research) gave a great presentation of how Java came to be and why it is the way it is. There was some Microsoft bashing, which is a good way to build up loyalty among the initiates. Bill Joy impressed me because he was instrumental when it all started (UNIX, C, the Internet), he has a grasp on what's happening and the vision to forge ahead.

The most thought-provoking session was given by **Danny Hillis** (inventor, scientist, adjunct professor at MIT). Hillis talked about the emerging network and the rate of change. He postulated that we're in the middle of a phase-shift, which accounts for all the turmoil and uncertainty. He likened this current phase-shift to previous ones, such as the initial formation of proteins all the way to the advent of language and now telecommunications. He explained a phase-shift is when a given system for communication

becomes sufficiently complex to then be used for computation. This is very much how Java is leveraging the Internet's communication facility to perform computation.

Kim Polese (senior product manager, Java products group) was master of ceremonies for five presentations by parties that were already using Java on the Internet. **Miko Matsumura** (*HotWired*) was very inspirational. He urged everyone to liberate themselves by writing Java code and repeatedly made the point that the revolution will not be televised. Like Hillis before him, Matsumura's words helped to put everything into context.

The afternoon featured seminars, the most popular being the Java language tutorials (by **James Gosling** and **Arthur van Hoff**). Even though I had been using Java for a couple months already, it was insightful to hear the creators explain things. There were a bunch of seminars for marketing, commerce, Web page design and animation, all on the Internet. I poked my head into the marketing and commerce sessions and confirmed my suspicion that no one has any idea what's going on.

There were about a dozen computers set up demonstrating various Java applications. Applix had a minimalist spreadsheet functioning, which pulled data from a server in real time (way cool). NandOTimes showed their online dynamically updated news service. Dimension-X let you play with their VRML implementation (using Java), which was neat.

Notably absent was Netscape. I looked high and low for a Netscape representative. I wanted to pin one down and ask some drilling questions about their Java implementation. No joy.

Sun will make all of the transcripts, slides, etc. from the Java Conference available online at <http://java.sun.com>

Cheers, Jason Osgood ♦

Technical Shareware

Absolutely the world's most extensive technical shareware collections, updated bi-monthly, with support for ALL BBSes and the most elaborate database directories in the business. Multiple CD-ROM collections for BBSes specializing in NetWare, AutoCAD, ASM, C, C++, Pascal, Visual Basic, VBDOS/QB/PDS, Paradox, Clarion, Clipper, Delphi, FoxPro, Spreadsheets, OS/2, MS-Access, Small Biz, Science and others. 215K record database and door of all PC products and companies. Many co-marketing, publishing, and other special services for sysops. From \$25. Free brochure.

EMS Professional Shareware
4505 Buckhurst Ct.; Olney, MD 20832
Voice:301-924-3594 Fax:301-963-2708
Email:ems@wdn.com
<http://www.xmission.com/~wwwads/ems>

ACCEPT CREDIT CARDS INCREASE YOUR PROFITS

Electronic Merchant Systems Specializes in Servicing:

- ♦ BBS and Internet Providers ♦ Start-Up Businesses
- ♦ Home Based Businesses ♦ Non-Traditional Businesses
- ♦ Mail Order Businesses ♦ Credit Problems Accepted

Compare Us To The Competition!

No Monthly Minimum
No Daily Batch Fee
No Chargeback Fees
FREE Phone Authorizations
Refundable Application Fee if Declined
Competitive Equipment / Software Pricing

Fax on Demand (800) 397-6230
Doc #110 or (800) 871-4531

EMS merchant process on the Electronic Closing House, Inc. (ECHO) Network. Merchants sponsored by First Charter Bank, NA, Beverly Hills, CA. Member FDIC. American Express & Discover merchants approved separately.

PC & MAC BBS READY FILES BBS IN A BOX

ISO3 CD NEW! - \$45

BBS in a BOX ISO HYBRID allows DOS & UNIX BBS systems to provide Mac files to Mac callers. Over 5,900 files with PC BBS descriptions.

Windows Ed.#2 CD - \$29.00

Now supports 2,450 Windows files for PC or MAC BBS with descriptions.

Newton CD #4 - \$29.00

BBS in a Box 16 on 3 CD's - \$60
10,800 Mac files for Personal or Mac BBS.



AMUG CD, Inc
4131 North 24th St, A-120
Phoenix, AZ 85016, USA
(602) 553-0066
(602) 553-0144 fax
sales@amug.org
<http://www.amug.org/>

MEDIAHOST 1.5

Version 1.5

Online Sales & Cataloging!



Includes: Internet, Dial-up, Photo Database

FREE client software, Email, File attachments, Rich text support, Document viewing, File libraries with image previews, Video, Sound, Chat conferences, 5 styles of menus, Visual design tools, 24 bit photos, Prelogon rules, Complete Access Security

MediaHouse Software Inc.

32 Eardley Road,
Aylmer, Quebec,
Canada, J9H 7A3

* One connection Server. Database Extension not included.



dBASE®, FoxPro®, Clipper® compatible,
Query first or Browse mode, Memo support,
User owned records, Order interface,
Scripts to process orders, Email post back,
Photo, AVI, Rich text document links,
Up to fifteen links per record,
Spread sheet view, Full access control

Sales & Information, **1-800-600-6914**

ftp.mediahost.com

www.mediahost.com

MediaHost Dial-up Server **(819) 682-3330**

MediaHost Internet (TCP/IP Address) **199.71.150.40**

MediaHost is a trademark of MediaHouse Software Inc. All other trademarks mentioned are the property of their respective owners.



Notes From The Underground by Wallace Wang

CAUSING CHAOS WITH AOHELL

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall. He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672 @compuserve.com or bothehat@aol.com or bo_the_cat@msn.com

Internet purists shudder in horror at the thought that anyone would join America Online and actually enjoy using it. But through a massive publicity campaign that has flooded the world with plastic bags and floppy disks, America Online has quickly become the number one online service in the United States.

America Online pioneered the proprietary communications program and simplified the often complicated world of telecommunications through its simple point-and-click user interface. Unfortunately their "training wheels" approach has often led to techno-phobic users who can barely turn on their computers, let alone understand the complexities of navigating through the Internet.

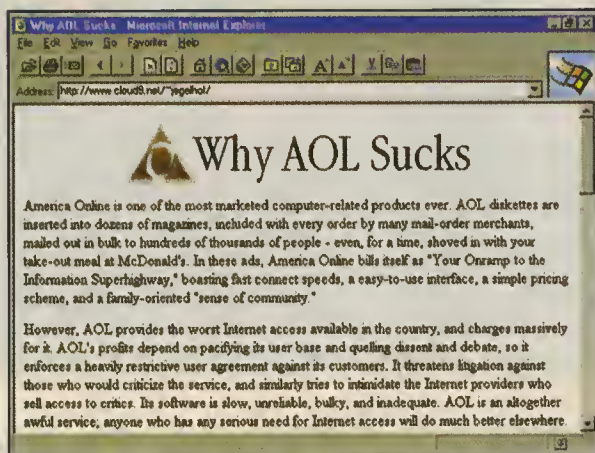
"When he complained that America Online should shut down the pedophilia chat rooms ... America Online ... canceled his account"

America Online. Such flashy graphics may look nice, but they slow your online exploring to a crawl which, coincidentally enough, means spending more time online and getting billed for every minute wasted viewing America Online's pretty user interface.

Complaints of censorship are another source of irritation among members. It's understandable that America Online would police their chat rooms to filter out profanity so they can attract more family members. But according to an ex-AOL member, who calls himself Da Chronic, America Online consistently closed the Hackers chat room, yet allowed other members to

freely engage in conversations that were obviously pedophilic in nature. When he complained that America Online should shut down the pedophilia chat rooms instead of the Hackers chat room, America Online didn't bother to reply but canceled his account instead.

Da Chronic decided to fight back by creating a program specifically designed to wreck havoc on America Online by exploiting known bugs in America Online's communications software. Da Chronic wrote a program using Visual Basic and christened it **AOHell**.



While there's nothing wrong with novices who want to use computers without understanding how they actually work, there may be something dreadfully wrong with the way America Online has allegedly taken advantage of these captive customers (<http://www.cloud9.net/~jegelhof>). Complaints of overbilling appear regularly in the two America Online Sucks newsgroups (**alt.aol-sucks** and **alt.aol.sucks**) and recently a lawyer (who else?) filed a lawsuit, claiming America Online overcharges members for the actual amount of time they spend online. (<http://www.sfgate.com/examiner/prev/examiner-072195/BUSINESS-3488.html>). Other members complain about the inordinate amount of time it takes for artwork to download from



You can download the Windows version at ftp://boardwatch.com/aoh95_v5.zip.

AOHell works in conjunction with the Windows version of America Online's ubiquitous client program that you need to access America Online. After running the America Online software, you load AOHell and up pops a floating window, listing all the avail-

[illegible]

The screenshot shows the AOL 4.0 desktop environment. At the top, the menu bar includes 'File', 'Edit', 'Go To', 'View', 'Masters', 'Window', and 'Help'. The toolbar below contains various icons for file operations and navigation. The 'ADMIN1.A' window is open, displaying the 'member services' page. The page has a purple header with the title 'member services'. Below the header are four buttons: 'Community Update', 'Index', 'Search', and 'Account Summary'. The main content area is divided into two columns. The left column is titled 'ONLINE HELP' and contains four items: 'HAVE QUESTIONS?' (with a link to 'www.aolhelp.at the AOL Help Directory'), 'ACCOUNTS & BILLS' (with links to 'receipts or change options' and 'cancel FTP'), 'MEMBER'S HELPING' (with a link to 'help from other members'), and 'TECH SUPPORT LIV' (with a link to 'live help from AOL Tech'). The right column is titled 'OVERVIEW HELP' and contains one item: 'AOL TECH SUPPORT BBS' (with a link to 'get something help via our BBS'). At the bottom of the window are four buttons: 'Site Address' (with a text input field), 'SMA Site', 'Connect to FTP', 'Driveto Site', 'Ask the Login info', and 'Bare Link'.

Another useful feature of AOHell lets you encrypt your e-mail, save it to a file, and send it to another America Online member. By encrypting your e-mail, you can take additional steps to protecting your privacy from any snooping eyes.

[illegible]

The screenshot shows the 'Mail to Send' dialog box in Microsoft Word 6.0. The 'Options' section is active, showing checkboxes for 'Include Message Numbers', 'Keep All Mail on Disk', and 'Auto sign-off when complete'. The 'Include Message Numbers' checkbox is checked. The 'Keep All Mail on Disk' checkbox is unchecked. The 'Auto sign-off when complete' checkbox is unchecked. The 'Add Items' button is highlighted. The 'Keywords' field is empty.

Besides chatting, you can target a specific person with an Instant Message (IM). Rather than take the time to answer every instant message you may get, just type a standard reply such as "Sorry, I'm busy right now and I can't take your instant message." The next time someone sends you an instant message, AOHell automatically sends them your canned reply so you don't have to answer them yourself.

If a particularly irritating person grates on your nerves in a chat room, fight back with AOHell. Click on one button and AOHell draws a gun pointing at a stick figure with the name of the person you don't like displayed for everyone in the chat room to see. Click on another button and AOHell scrolls an ASCII drawing of a middle finger.

Go to: Mail Members Window: Mail

John Coward

Forward to who: Who supposedly sent you the mail:

What was written in the message you're "forwarding" this to:

From: From ☐ CST ☐ PST

YOUR server name:

The date the mail was supposedly sent: (example: 10-01-20)

Time when they supposedly sent you the mail: 10-01-27 (seconds) 9:51:20

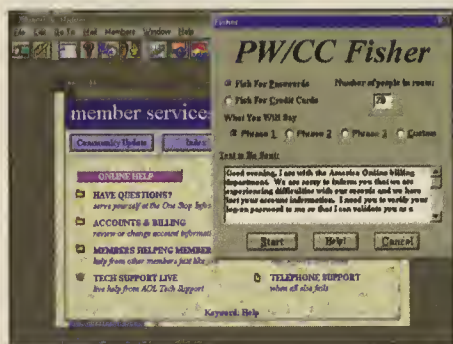
The file's subject:

What they commonly said:

Keywords Help

As a joke, forward faked messages to your friends, and claim that Miss February has been writing you love let-

ters. Then offer your fake forwarded messages as "proof" to see if your less knowledgeable friends fall for the trick.



It goes without saying (although it's important to repeat anyway) that you should never give out your password or credit card number to anyone while online. Yet many people don't realize this danger so AOHell offers a password/credit card fisher that lets you take advantage of them. Just enter a chat room, click the Fisher button, and AOHell sends an official looking message to the person of your choice, claiming that America Online's billing department needs that person's password or credit card number.

Obviously this AOHell feature can be exploited for illegal use, but now that you know it exists, it should remind you never to give out important information like passwords and credit card numbers while online in public chat rooms. Then again, if you're stupid enough to give out such information to complete strangers, maybe you deserve to be fleeced after all.

While America Online deserves their current leadership in the online market through aggressive marketing and their

visually stunning user interface, programs like AOHell do make you think. Are online services like America Online really interested in providing consumers with the best value for the money, or are they just taking advantage of computer novices who simply don't know any better? In that regard, we should applaud anyone who can raise such questions through underground programs like AOHell. ♦



Business Software for Online Services, Web & BBS

<http://www.mmb.com>

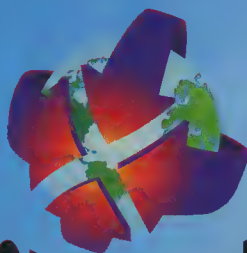
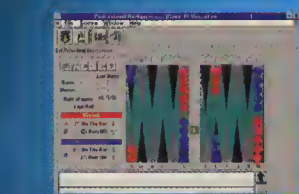
info@mmb.com

(310) 318 5302

mmb development corporation
voice (310) 318 1322

1-800-473-3177

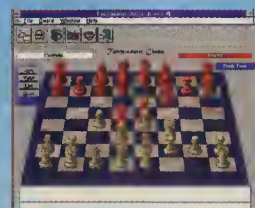
Call for a free Catalog!
FREE 900 SERVICE!
 Over 100 Add-ons for Worldgroup



WORLDGROUP™

Online Interactive Software

\$339
8 user

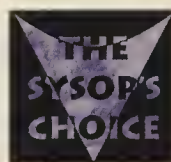


TESSIER TECHNOLOGIES, INC.

Voice: 954-473-5525 Fax: 954-473-2122 BBS: 954-424-4443
<http://www.wisenet.com>



Development Hardware & Software



What makes the SmartCard-8™ the best Intelligent Multiport Serial Card you can buy?

COMPATIBILITY

At the heart of the SmartCard-8™ is its compatibility with more operating systems than any other Intelligent card available.

SPEED

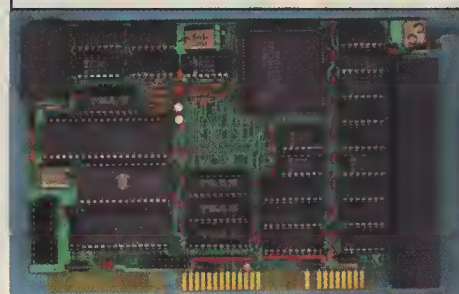
The SmartCard-8™ is also Fast - Data transfer rates up to 115,200 with buffers that are 200 times greater than those of 16C550 UARTs.

FLEXIBILITY

The SmartCard-8™ can be used for many applications including BBS, Data Acquisition, Machine Control & Point of Sale.

SmartCard-8™ Features

- 8 High Speed channels.
- Built in FOSSIL driver and buffers.
- Guardian Watchdog protects system integrity.
- Compatible with *all major operating systems.*
- Native drivers for: OS/2, Windows NT, Windows 95, MBBS, WorldGroup & Excalibur *and many others!*
- Full 10 conductor RS-232C interface.
- Data rates to 115,200 bps.
- Perfect for Sysops - *BBS & Internet Connectivity!*



What makes the BlackBoard-8™ the best Non-Intelligent Multiport Serial Card you can buy?

COMPATIBILITY

BlackBoard-8™ is compatible with more operating systems than any other Non-Intelligent card available today.

SPEED

It's the *World's First* multiport serial card with 16650 UART's!

FLEXIBILITY

Excellent for Bulletin Board Systems
Works with all popular brands of BBS software!

BlackBoard-8™ Features:

- 8 ports with 16650 UART's
- Data rates to 460,800 bps!
- Flexible addressing and IRQ structure (mixed, shared & discrete).
- 8 addressing modes including vertical stacking.
- Guardian Watchdog protects system integrity.
- FCC part 15 compliant.
- Up to 6 cards can be installed in a single computer (more if an external chassis is used).

ORDER TOLL FREE
1-800-282-GTEK

P O. Box 2310
Bay St. Louis, MS 39521-2310
Voice - (601) 467-8048
Fax - (601) 467-0935
BBS - (601) 452-0058
E-mail - spot@gtek.com

Call for OEM & Dealer Pricing



LOOK FOR THIS
SYMBOL WHEN
SELECTING
BBS SOFTWARE

VISIT OUR
NEW
HOMEPAGE

<http://www.gtek.com>
or
Fido 1:3604/18




CONSUMMATE WINSOCK APPS by Forrest Stroud

We have a lot of great apps to cover this month, so we'll skip our habitual editorial...

ing dialing information for your friends and acquaintances. The directory also offers sorting by name or alias for efficient perusal. You have the additional option of dialing the person's Internet address or typing in their e-mail address for a point to point connection. One final feature offered by WebPhone that elevates it yet another level above the competition is an extensive and attractive multimedia online help system with tons of useful information.

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://cwsapps.texas.net> and <http://cws.wilmington.net>.

Forrest H. Stroud is a senior at The University of Texas at Austin. He is currently pursuing a degree and career in Information Systems and Data Communications Management. Stroud can be reached at <mailto:Neuroses@mail.utexas.edu>.




WEBPHONE

Desc:	Full-duplex, real-time voice communication with an awe some interface!
Pros:	The coolest interface to date, cellular phone motif, impressive array of features
Cons:	Many of the best features are still "vaporware" — not yet publicly released
Location:	ftp://ftp.enterprise.net/pub/mirror/winsock-1/talk_voice/wpbeta?.exe
Filename:	wpbeta?.exe
Status:	Free beta evaluation
Company:	ITEL Corporation

WebPhone may well become the killer app that puts to shame similar offerings from VocalTec (Internet Phone) and Quarterdeck (WebTalk). Even though it is still in early beta release, WebPhone already offers an impressive array of features and an even more stunning "wish list" for future releases. When the official public release of WebPhone arrives it is expected to include full duplex support for real time voice communication between parties (half duplex is currently offered), the ability to handle up to four concurrent and simultaneous conversations, speed dialing for quickly calling your favorite friends, built-in true Caller ID and integrated ITEL World Wide Directory Assistance, voice mail and advanced message retrieval capabilities, point to point connection with knowledge of just the person's e-mail address, and a unique WebBoard feature for retrieving and posting audio and graphic messages. So if all of these features are not yet available, you might wonder just what features are currently available and whether a beta release of WebPhone is worth your time and attention.

WebPhone's extremely cool interface alone makes it worthy of a download. The cellular telephone motif is carried to the extreme for a very impressive and very cool look and feel that also makes the client fun to use. The phone also holds innumerable options for customizing your connection including microphone and speaker custom controls, call holding and muting, voice mail retrieval, an audio utility for recording and playing outgoing messages, a "do not disturb" button, and a separate menu for setting additional user preference settings. WebPhone also offers an advanced address book directory system for stor-

The answer to the above question concerning whether WebPhone, even in beta release, is a viable download is an obvious and unconditional yes — it's definitely worthy of your time and attention. No other client can match WebPhone's extremely cool interface, and while many features have yet to be integrated into the client, the current features included are more than enough to keep most users happy. So is WebPhone the best available Internet communication app? Perhaps at this stage the battle is still too close to call, but without doubt, if and when WebPhone delivers on its many promises, WebPhone will indeed be the consummate client for communicating with others in real-time on the Net.



ALPHA WORLD


Desc:	A new multi-user 3-Dimensional community in the spirit of Worlds Chat
Pros:	3-Dimensional world to explore with near limitless possibilities
Cons:	Slow, limited to one generic avatar, communications problem with some video drivers
Location:	ftp://ftp.enterprise.net/pub/mirror/winsock-1/talk/aworld??.exe
Filename:	aworld??.exe
Status:	Freeware
Company:	Worlds Net

Worlds, Inc. seems to know exactly what the VRML language should evolve into. I wasn't prepared for anything new from this amazing company until later this fall when the greatly anticipated Worlds Fair is expected to be released. I couldn't have been more surprised to learn of the release of a new, "super" version of Worlds Chat called AlphaWorld. While still in beta, this program shows promise of being extremely interesting and entertaining to individual users as well as being profitable at the corporate level. Like Worlds Chat, AlphaWorld is a 3-dimensional landscape complete with scenery, realistic objects, and generic avatars. Once you "naturalize" yourself with the

AlphaWorld immigration patrol, you'll be able to control your own avatar and converse with others as you venture out into the world. While the time-saving hot-spots feature (similar to book-marks but on a 3D level — think of them as teleportation devices) of VRML isn't included in the beta release, you can navigate in many new ways including a flying mode and a 3rd person point of view, as well as the more common "walking" mode.

So what gives AlphaWorld even more potential than Worlds Chat? In addition to its ability to portray realistic landscapes and objects (including trees, houses, and even fire hydrants), every object in Alpha World has the potential for acting as a link to a web site, gopher site, mail address, newsgroup, and more. Combine this with a forum for conversing with hundreds of others and you have the beginning of an extremely new and fascinating technology that corporations will be able to use in augmenting typical activities like training sessions, presentations, conferences, and perhaps most importantly, marketing and advertising promotions. Worlds Chat also has many of these features but is limited in the types of objects that can be represented. This is perhaps best evidenced by AlphaWorld's potential for virtual communities.

Entire communities can be created with AlphaWorld — communities that we may well learn to call our second home someday in the future. Inns, houses, malls, and stores are just a few examples of the virtual real estate that can be found in AlphaWorld. With the aid of any common web browser, you can also create links to any site on the Internet from your virtual home. While AlphaWorld does have potential, users should be aware that this technology is still in beta and presents several areas that could be improved. First, the multitude of avatar types found in Worlds Chat are forsaken for just one generic avatar in this version of AlphaWorld — perhaps there will be more in the future. Also, AlphaWorld tends to be quite slow relative to Worlds Chat due to its rendering technology (this technology is expected to be upgraded and improved in the near future). Finally, some Windows 95 and 3.1 users are currently limited to watching others communicate, due to a problem with certain video drivers. Not discounting these current limitations, this is amazing technology that is almost too good to be true. If you're getting impatient for Worlds Fair to arrive, take a look at AlphaWorld — you won't be disappointed.



BLUE-SKIES

Desc:	Your comprehensive source for real-time weather reports and forecasts
Pros:	One of the best resources on the Internet for weather and Earth sciences information
Cons:	Lacks sufficient International information, its complexity may be daunting for new users
Location:	ftp://mammat.us.spr1.umich.edu/pub/Blue-Skies/Windows/bs?????.exe
Filename:	bs?????.exe
Status:	Freeware
Company:	The Weather Underground

Without a doubt, The Weather Underground is the most extensive, comprehensive source for Earth sciences information available on the Internet. Blue-Skies is the client program that delivers The Weather Underground direct to your PC. Based on Dave Brooks' WS-Gopher client, Blue-Skies is a


gopher-based navigational tool that guides you through the massive meteorological repository that is The Weather Underground (TWU). TWU includes graphical charts of various U.S. weather patterns, updated on the hour, including information on temperature, relative humidity, dewpoint, heat index, wind speed and direction, precipitation, and much more. You can even "zoom" into the geographic region of your choice and also get vital weather statistics for your favorite cities in the U.S.

These features are just the tip of the iceberg, however; Blue-Skies also allows you to venture beyond The Weather Underground with preconfigured links to informational resources containing topics like pollution reports, ski conditions, long-range forecasts, earthquake reports, severe weather and hurricane advisories, ozone information, marine forecasts, a national weather summary, Canadian forecasts, daily climatic data, and limited international data. Blue-Skies contains links to nearly every available Internet resource that makes use of information from the National Weather Service (NWS) and does so with more than just textual reports; graphical charts and movies comprise a large portion of the overall information.

The multimedia effect is part of what makes Blue-Skies such an interesting client; another part is the overwhelming amount of data contained on nearly every aspect of our Earth. Unfortunately, though, the tendency for most resources is a slightly ethnocentric bias towards the United States (in part due to U.S. funding for most of these sites) — while there is a fair amount of International information available, the vast majority is U.S. specific. Blue-Skies may also be overly complicated for some users. Those looking for concise, easy-to-read weather reports and forecasts may find that their needs are better met by a client like WinWeather. For the serious Earth sciences and weather devotee; however, no other client even comes close.

ACCESS WATCH

Desc:	A new web statistics program with many cool features
Pros:	Cool web stats delivered on demand, offers several features not found in the competition
Cons:	Lacks the ease of use found in Web-Counter and IAB, lacks some of Statbot's best features
Location:	http://www.eg.bucknell.edu/~dmaher/accesswatch/getAccessWatch.html
Status:	Freeware
Author:	Dave Maher



AccessWatch is a new stats program based on Perl that, like Statbot, doesn't require the use of CGI scripting/accessing. However, Perl 5 is needed in order to run the script; as well, you'll need access to your web server's logs in order to obtain web statistics for AccessWatch. AccessWatch offers several advantages over Statbot and similar competitors, including the ability to separate accesses into categories based on domain type (i.e. by country or site type within U.S. — com, net, or edu). AccessWatch also lists stats for individual pages based in order from the page with the greatest number of hits to the least — there is even a graphical bar representing the overall percentage of hits each page has accounted for. Other cool features include the ability to project expected hits per day based on the current number of hits and an option for report-

ing the percentage of use your web site accounts for on its server. Many users will find their web stat needs filled in full by AccessWatch.

Unfortunately, there are several disadvantages in the current version that keep AccessWatch from being more competitive. First, stats automatically reset whenever the web server log does, which can be as often as a daily process. This is opposed to Statbot's incorporation of a database of hits in order to keep track of stats even after a web log has been reset a number of times. The result of constantly resetting stats is that cumulative web statistics cannot be accounted for over an extended period of time. Second, AccessWatch can currently only work with one web log; i.e. if your web hits are recorded in multiple logs, you can only track the hits of one log at a time (again, as opposed to Statbot which offers the capability of working with up to seventeen different logs). Third, users of AccessWatch will likely suffer from many of the same installation problems as users of Statbot; neither program comes close to the ease of use experienced with clients like Web-Counter and Internet Audit Bureau. Finally, the page created by AccessWatch suffers from a lack of cus-

tomizable features; the only way to change the appearance of the page is to modify the PERL script.

WINPACK DELUXE

Desc:	Another compression-deluxe package available in 16- and 32-bit versions
Pros:	Excellent selection of features and compression/decompression types, quick file viewing
Cons:	Lacks several features including virus scanning, LZH compression, and drag 'n' drop
Location:	ftp://ftp.cica.indiana.edu/pub/pc/win3/uttl/
Filename:	wpackd?? .exe
Status:	Shareware - \$20. Free 21 day evaluation
Company:	AshSoft Software

The WinPack Deluxe client offers support for more types of compression than any other client currently available. BinHex, GnuZip (.gz), Tape ARchive (TAR), UUencode, ARJ, and PKZip/PKUnzip compression/decompression modes are all available with WinPack in both the 16 and 32-bit versions. You can also use WinPack Deluxe to create self-extracting zip files. Want more features? Try quick file viewing for all file types (binary or text), extract and install/destall commands for auto-

matically compressing or decompressing archives, a test option for detecting whether a file in an archive is corrupted, support for long filenames (in the 32-bit version), archive conversion (for converting an archive from one compression type to another), and quick renaming capability. While this is an impressive list of features, there are several missing features that would make WinPack an even better client. Providing a front-end for virus scanning of archives, drag 'n' drop support, a more extensive online help documentation system, integration with Explorer (for the 32-bit version), right mouse button functionality, and support for LZH compression are a few of the features currently absent in WinPack. Overall, WinPack is a very solid compression utility that offers a selection of features nearly on the same level as WinZip and is, at the same time, less expensive than WinZip (\$20 compared to \$29).◆

* Discount Hardware & Software *

RocketPort

4 Port \$ 219.95
8 Port 359.95
16 Port 699.95
32 Port 1349.95

Includes Cables!

BOCA

6 Port \$ 99.95
w/cables 139.95
16 Port 239.95
w/cables 349.95

**works with TBBS
& Major BBS!**

MediaHost

2 User \$ 345.00
w/dbase 695.00
4 User 425.00
w/dbase 775.00

**Save \$25.00 with
purchase of RocketPort!**

TBBS

4 User \$ 175.95
w/TBBS 449.95
16 User 579.95
w/TBBS 1299.95

**Call for other
low priced add-ons**



Modern BBS

Rick Kosick

2300 Computer Ave I-27
Willow Grove, PA 19090
(215) 830-1428

CD7 Drives
Please call
for pricing

WEBSITE
O'Reilly &
Associates

WebAuthor
WebServer
Quarterdeck

Fax(215) 784-1683 BBS(215) 784-1681
sales@modern-bbs.com
telnet to: mbbs.vsi.net

Visit us on the Web at <http://www.mbbs.vsi.net>

U.S. POSTAL SERVICE WEB SITE

by David Hakala

Sometimes even the U. S. Postal Service gets things right. Its useful and elegant Web site at <http://www.usps.gov> is a job well done. Everyone who mails will save time on phone-hold and standing in line by using this site to look up current postal rates, 5- and 9-digit ZIP codes and the answers to questions such as "Why can't I get my mail delivered earlier in the day? How can I get a ZIP code directory? What happens to nondeliverable mail?"

The stamp gallery is the most colorful page, sure to enthrall any philatelist. The GIF images are about 80 to 160 Kb each — hardly camera-ready art but good-looking enough and quickly loaded by a Web browser. You can view but cannot download the GIF files.



Welcome to the



UNITED STATES
POSTAL SERVICE™

World Wide Web Server

The Business Publications section can save many trips to the local post office. Some of the most commonly used USPS forms are available in Adobe PDF format, including Plant-Verified Drop Shipment forms and the publisher's favorite — PS Form 3526 - Statement of Ownership, Management, and Circulation. Business mailers will also want to bone up on the Mail Classification Reform case with the help of PDF files on the USPS web site. Sweeping changes to business mail classes, services and rates will reward businesses which preprocess their mail according to the new specs.

The site features an Address Quality and ZIP Code Lookup page that provides several lookup options

that can help you address mail so the postman understands where it's going. On the ZIP+4 form, you can enter an address such as "8500 W. Bowles" and a city/state or ZIP code, and back comes the USPS Standardized Address with ZIP+4 Code.

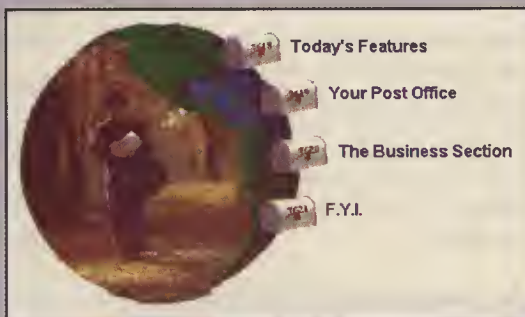
The City/State form accepts a 5-digit ZIP code and returns all the city/state combinations that it covers, along with USPS-acceptable alternative city names. We found that "Bow Mar" is an acceptable alternative to "Littleton." The ZIP Code form accepts city/state and returns all of a city's ZIP codes, plus information about entities within the city/state. For instance, "Denver Colorado" includes ZIP codes 80014-80299. Within this range, the University of Denver has a ZIP code all to itself (80208) and the First Interstate Tower South address can be abbreviated as "FIRST INTSTE."

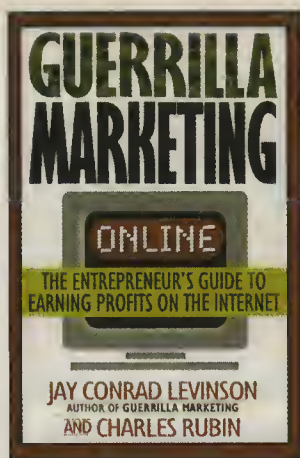
The Postal Service buys billions of dollars worth of goods and services each year. The Web site offers a guide to the procurement process, lists of major commodities purchased and lists of purchasing contacts grouped by Postal service areas. (Some of the links to contact lists were pointing to the wrong document when we tried it.)

Other pages provide press releases — nothing about the electronic postmark proposal, but you can learn what the USPS is doing with natural gas powered delivery vehicles and other nice things. You'll also find

directions for obtaining USPS publications such as the 5-Digit ZIP Code directory. Philatelists will find bulletins about new stamp releases. The desperately bored surfer can read transcripts of speeches made by USPS executives.

The USPS Web sites is one of the most useful (if somewhat mundane) government sites available. It's a good URL to keep in your bookmark file. ♦





BOOK BYTES by L. Detweiler

Guerrilla Marketing Online

By Jay Conrad Levinson and Charles Rubin

1995, Houghton Mifflin Co.

303 pages, \$12.95

ISBN #0-395-72859-2

<http://www.sedona.net/crubin>

"Fear and loathing" might best describe the emotions that Internet veterans feel towards the frenzied influx of marketers on the Net. One form of this antipathy can manifest as server-crashing mountains of flamemail directed at particularly egregiously obnoxious offenders, such as the now infamous story of Canter & Siegel's green card advertisement. An uneasy peace seems to have settled after this legendary dust storm, but the entire subject of online marketing is still tainted with a stigma in the eyes of Internet purists.

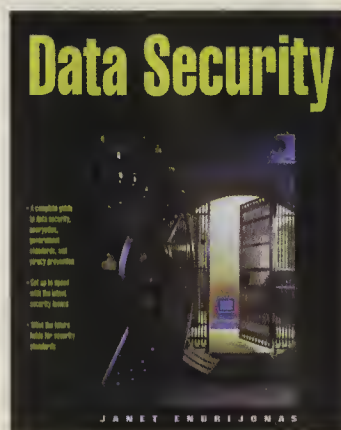
Both authors have about a dozen other titles to their credits, many of them bestsellers. This is the most recent book in Levinson's series in *Guerrilla Marketing* with at least six other titles. Levinson virtually has this book genre reduced to a formula, and in some niggling ways the material is an overlay of his prior recipes grafted on cyberspace. Nonetheless, the authors' qualifications are impeccable, and the end result of the collaboration is a modest book packed with concrete and practical suggestions. The book tends to be terse with headings on almost every paragraph; mimicking at times the brevity and machine-gun style of a slideshow presentation.

This book soothes the raw nerves of the legions of online anti-marketing individuals as much as possible. Levinson and Rubin talk about how an "online reputation" can be "severely damaged" by use of spamming runs and unsolicited junk e-mail, conveying the moral that "marketing techniques that might seem perfectly natural in the outside world can ruin your reputation online."

Unfortunately, Levinson and Rubin fall short on Web coverage, which ranks around only "adequate." This is a serious handicap for the book. Online marketing can almost be separated into two categories, namely web-centric and everything else. Any readers looking for emphasis on a web-centric marketing approach are advised to go elsewhere. Any future edition of this book, if published, is almost assuredly going to have very tight and focused web information.

Overall, the book is a good guide for a marketing type who is not already familiar with the Internet or

other online services and needs an overview of all the aspects and approaches available. BBS-specific information is sufficient. However, only minor coverage is given to specific services such as America Online, Prodigy, and CompuServe other than to describe their forums where messages can be posted. The material is mostly Internet-specific and is at a very basic level such as describing mail signatures and introducing newsgroups and mailing lists. Overall, *Guerrilla Marketing Online* is a reasonable value that avoids presentation landmines.



Data Security

By Janet Endrijonas

1995, Prima Computer Books

350 pages, \$34.95

ISBN 1-55958-750-4

Ordering: (916) 632-4400

This book fills a gaping hole in mass-market computer literature by presenting a nontechnical view of security issues for professionals and general computer users. The lucidity and insight make a long overdue breath of fresh air in a field rife with endless misconceptions, confusion, hysteria, paranoia, and mythology. Endrijonas seems to particularly enjoy piercing and debunking the myths, especially in the area of computer viruses (3 short pages on "The Mythology of Computer Viruses" should be mandatory reading for anyone who uses the term).

Unfortunately, the field of computer security is also rampant with an army of stern consultants who specialize in informing their clients that no amount of security is enough and criticizing all security schemes invented. Endrijonas emphasizes a compromise and balance that addresses the key catch-22 of security: computers must be accessible to be used,

but accessibility is antithetical to security. She is just as disapproving of overzealous or unrealistic administrators as she is of clueless users.

Topics are right out of the headlines: industrial espionage, the Clipper Chip, SATAN, Windows NT, National Information Infrastructure, Skipjack, RSA, encryption export, EDI, Internet password sniffing, firewalls, Netscape, commerce, viruses, Nautilus voice encryption, etc. The depth of coverage is appropriate for nonexperts in security who need some basic education, suggestions for practical approaches, and reassurance. The book has many sidebar excerpts from other sources, which while very brief, are highly pertinent and timely. Security experts should avoid this book as introductory but rejoice that it might make their job easier (at the very least this is a book they can recommend to newbies).

Readers interested in technical aspects of security schemes, cryptography in particular, are much better off going to Schneier's volume. However, cypherpunks will generally approve of the extensive quoting from IEEE statements on the Clipper technology, although the pro-privacy stance is only lukewarm. "The Clipper/Capstone ...proposal contains three fundamental flaws: a classified algorithm, a questionable key-escrow requirement, and a communication standard developed for public use without public scrutiny." "Encryption algorithms should be exportable, providing American industry with a level playing field in the international market." Endrijonas herself does not take a position on key escrow, saying only that there are "zealots on both sides of the argument."

Hopefully after reading this book, the reader will no longer fret over whether it is possible to contract a virus from a computer, although the new possibility of SATAN residing there may quickly take its place. ♦

AccuNet™

THE NEWS AND INFORMATION SOURCE for your bulletin board!

Starting at only \$5 per month

Available through the INTERNET

Your ONE STOP source for news and information.

ACCU WEATHER®

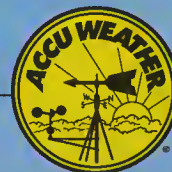
The World's Weather Leader™

619 W. College Avenue, State College, PA 16801

Call 800-566-6606 Fax 800-683-6329 E-mail info@accuwx.com

Call 800-566-6606 for details.

© 1995 AccuWeather, Inc.



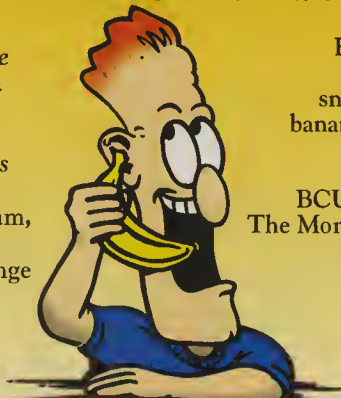
- **WEATHER**
- U.S. and worldwide forecasts, data and color graphics
- **SPORTS**
- Scoreboard, box scores, news, stats
- **LOTTERY**
- All state results
- **SOAPS**
- Daily summaries of all network soaps
- **NEWS**
- National and international
- **HOROSCOPES**
- Daily horoscopes and lucky numbers
- **FINANCIAL**
- Business news, stocks, metals
- **ENTERTAINMENT**
- Movies, books, videos, music, gossip

BananaCom!

CUSTOM MODEM SOFTWARE

Designed For Your First Time Modem Users To Be On-Line In 30 Seconds!

"I would estimate that BananaCom is responsible for \$800 -\$1000 of new subscriptions each month."
- Ben Cunningham, Sysop, The Nashville Exchange



For A FREE sysop pack, e-mail your snail mail address to banana@montana.com.

Or, grab BCUSTOM.ZIP from The Montana Banana BBS (406)543-8234.

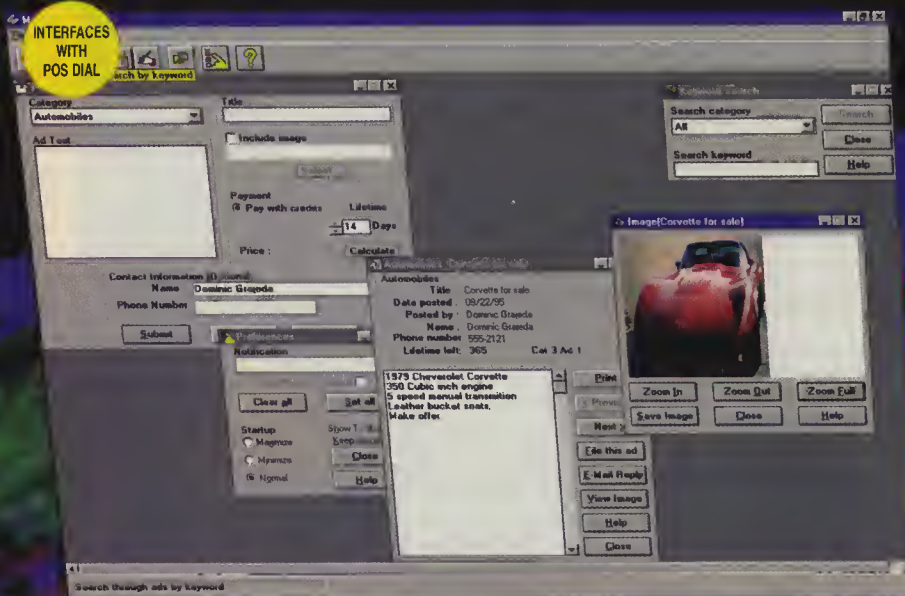


"Best of Show (Overall)"
"Best DOS product (Software or Hardware)"
Cyber.Xpo.95.

Marketplace™ \$299

Marketplace is a user friendly, menu driven classified advertising database. Marketplace allows you to charge by the word or by the ad. Collect payments by credit card or by deducting credits and/or days. Marketplace can process credit card purchases instantly when used with our POSdial Module! Client/Server

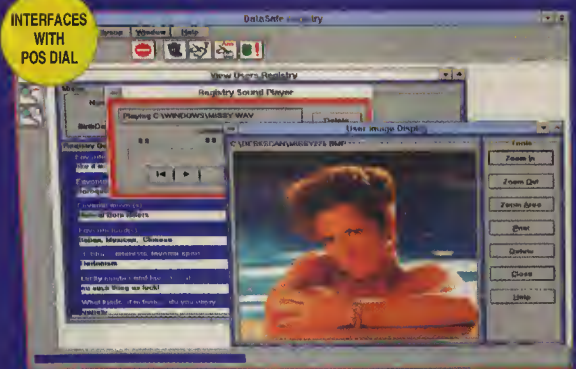
credit card transactions are now encrypted! Callers can be notified when logging in that new ads were posted in categories they specify.



Includes ANSI and ASCII versions!

Multimedia Registry \$199

Multimedia Registry is the ultimate user registry database! Supercharge your online service with sights, sounds, and online configurability. In addition to answering sysop defined questions, callers can include a picture (GIF ,JPG, TIF, PCX ,etc.) of themselves along with a soundclip (WAV). Generates WWW pages for each user when used with Vircom's Major TCP/IP or Galacticom's ICO WWW Server!



Includes ANSI and ASCII versions!

Call for a **FREE** Product Catalog

DataSafe
Publications

800-870-0004 Orders

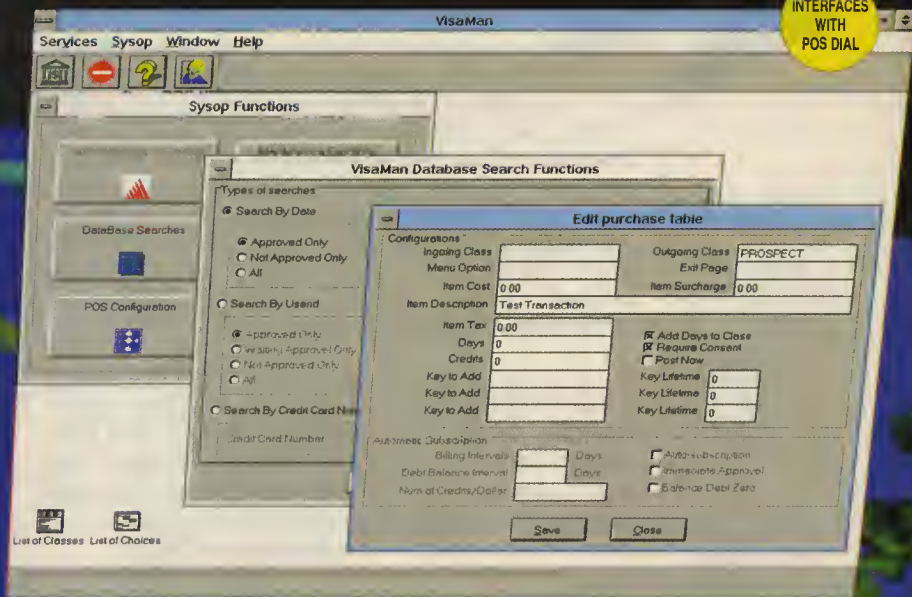
505-294-4980 Voice

VisaMan™ \$199

VisaMan Automatic
Monthly Billing Upgrade
\$100

The premier credit card subscription module for World group. Your sales may increase by over 100% if you accept credit cards online! VisaMan can process credit card purchases instantly when used with our POS Dial Module! Existing VisaMan owners can upgrade to this Worldgroup version for only \$25. Client/Server credit card transactions are now encrypted!

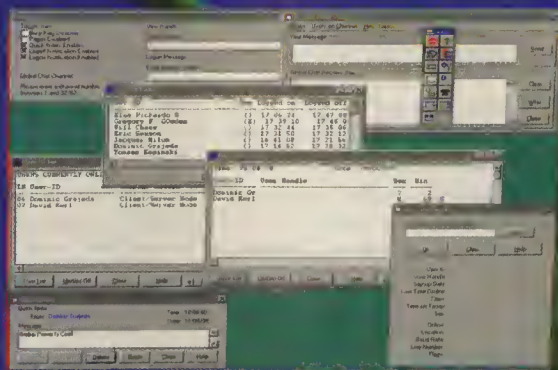
INTERFACES
WITH
POS DIAL



NEW Powerful
Encryption for Credit
Card Transactions!

Includes ANSI and ASCII versions!

Global Power™ \$99



Includes ANSI and ASCII versions!

Global Power is a complete package of global commands for Worldgroup. Global Power commands can be executed from almost any prompt on your BBS and provide you with many functions that most Sysops can't do without! Sysop commands are simple and direct. For example, to post 10,000 paid credits to Fred simply type -PS 10000 P Fred

Exclusively for

Galacticomm
Ambassador Dealer
Call for LOW
Galacticomm Prices

WORLDGROUP
Online Interactive Software

Telnet: dsafe.com
WWW: <http://www.dsafe.com>

POS Dial - \$250

The Point Of Sale (POS) Dial module interfaces with VisaMan ,Omni-Mall, and Marketplace to perform automated online credit card processing. Never worry about manually processing credit card sales again! Additionally, we can refer you to a merchant account provider so you can accept credit cards. Call us for a referral! FDR & MDI Certified.

505-294-1575 BBS
505-294-8225 Fax



CYBERWORLD MONITOR

Frank X. Sowa

WE HAVE FOUND THE ENEMY, AND IT IS US!

Frank X. Sowa is president of The Xavier Group, an international consultancy providing strategic planning, forecasting, training, and development of business and communications systems for organizations since 1981. As a certified software consultant for Softarc's First Class, and a reseller for other companies, he configures customized BBS systems for organizations, complete with "regular content updates." Sowa is also founder and sysop of SEED.NET (412) 487-5449, "the online incubator" for small businesses, a seamless BBS-to-Internet (PPP) provider, with business start-up assistance and seed capital available online. **mailto:franksowa@seednet.com**

"We have found the enemy! And, it is us!!" exclaimed the cartoon character, Pogo, a few years back. However, those in the defense, FBI, civilian police, intelligence and Beltway insider circles are not taking that threat in good humor.

They have financed hundreds of studies over the past year to better identify the threat and determine countermeasures against it. Gene Stephens, professor in the college of Social Justice at the University of South Carolina, for example, has been tapped by the feds to examine "Crimes in Cyberspace, The Digital Underworld."

In an approach similar to that of CMU's "statistical expert" Martin Rimm and his Cyberporn study, Stephens reports on the "billions of dollars that have already been uncovered, the billions more that have gone undetected, and the trillions in losses that will be stolen by the emerging master criminal of the twenty-first century — the cyberspace offender."

ANYONE WHO IS COMPUTER LITERATE CAN BECOME A CYBERCROOK!

He writes, "Worst of all, anyone who is computer literate can become a cybercreek." (Oh, shudder the thought. I guess he also believes that anyone who is computer literate must also have no morals.) He goes on to say, "The crime itself will often be virtual in nature — sometimes recorded, more often than not — occurring only in cyberspace, with the only records being fleeting electronic impulses."

The Stephen Study focuses on six "cyberspace crimes:"

1) *communication crimes* — including hacking and cracking, cellular theft and phone fraud which he says will escalate as the medium shifts to computer-based multimedia systems that are attached to the Internet;

2) *government crimes* — filing phony and fraudulent electronic tax returns, selling or altering government information found online, and planting computer viruses in government systems;

3) *business crimes* — internal computer crime on networks by disgruntled employees, industrial espionage via the Internet and small online service providers, online credit card theft by electronic deception or by filing fake applications;

4) *cyberstalking and cyberporn crimes* — pedophiles who surf small computer online services and the

Internet and develop dangerous relationships with young boys and girls, cyberspace harassment by disturbed loners among the computer literate, and the publication of unwanted pornographic and illicit sexual materials on BBSs where they can be accessed by anyone;

5) *information warfare and online terrorism* — detonation of explosives by means of the Internet or by radio signals bounced off of satellites, concerted efforts to manipulate and/or destroy information and information linkages and transmission channels with trojan horses, viruses and worms, purposely spreading computer viruses, computer extortion;

6) *virtual crimes* — selling nonexistent properties, stocks or bonds.

The subsidized study concluded that "the outlook for curtailing cyberspace crime without new Congressional laws, federal regulations, and additional spending is bleak because most agencies and local civilian authorities do not have the personnel or skills to cope, and simplified systems are more vulnerable to attack by intruders."

GOVERNMENT TO MONITOR CITIZENS VIA NII

In his report, Stephen credits the use of computer technology for the following "good news:"

"Crimes such as murder, rape, assault, robbery, burglary, vehicle theft and even weapon discharge — will be brought under control in the years ahead by a combination of the use of advanced online computer technology (read digital wiretapping) and proactive community policing. Creation of a cashless society by the use of the online networks, for example, will eliminate most of the rewards for robbers and muggers, while smart houses and cars will thwart burglars and vehicle theft. Government implanted bodily function monitors and chemical drips will keep most criminal offenders identified and under control. More importantly, proactive policies in cyberspace will alleviate much of the criminal potential in young people." That's Stephens good news? Sounds like the kind of democratic, free and private America we'd all hold dear!

The *bad* news, according to Stephens, is that "access to cyberspace is beginning to expand geometrically, and technology is making access even more user-friendly and affordable to millions of users." Stephen's study, like the Rimm study, goes on to recommend more government control and regulation of online services and telecommunications providers,

and shifting the capability of access to the Internet away from small service providers to the "established long distance, and regional telephone companies, the cable companies, and the major online service providers like America Online, the Microsoft News Network, and CompuServe."

The bad news for those of us in the online industry is that government funding has purchased academic "experts" like Stephen and Rimm to perform their studies and gain recognition as providing "scholarly and independent input" into the politicized debates over control of cyberspace versus the freedom of individuals in cyberspace (even when their approaches are less than scholarly and not independent). These "plants" help fuel the agenda of groups who will stop at nothing to "terrorize" those of us who frequently use online access and computer literacy to our advantage. We have become the enemy. And, in 1996, certain groups who have no understanding of cyberspace are hell-bent on putting the jackboots on any uncontrolled growth. Even worse, they have been strategically dividing the online world by supporting the large monopolistic services at the expense of the small providers. In their view of the world, the only happy world is a socially-engineered world where the oligopolies, with the full support of government, control all human actions in cyberspace.

A GOVERNMENT CONTROLLED WORLD

Throughout 1995, the Beltway bureaucrats have been working hard behind the scenes to create a budget and countermeasures to fight against "computer crimes and information warfare" by the masses — which they feel is the greatest threat to our national security over the next few years. Specifically, in over 35 federal reports I read to research this article, they cite a strong belief in an attack via the Internet by "terrorists" on the Public Switching Network of this country resulting in a devastating blow to national security, emergency preparedness and the economy may occur before the end of the century.

Defense experts cite a real concern, because since the defense drawdown began under Bush, over 90 percent of all defense-related information traffic has been shifted over to the public Internet. This poses a terrible threat in the eyes of the Pentagon brass, because the American military is the most information-dependent force in the world. "If

Internet transmissions were to stop — so would the military," said Emmett Page, Assistant Secretary of Defense for Command, Control, Communications and Intelligence. "As a result, we've had no choice but to create an offensive capability in cyberspace. I can't discuss it ... However, you'd feel good and feel safe and secure if you knew about it," he added.

"If Internet transmissions were to stop so would the military."

Occasionally, some component of their "defense mesh" (sometimes you wonder if mesh wasn't actually the misspelling of "mess") leaks to the public and is met with disdain, like the idea of the FBI greatly increasing digital wiretapping capabilities and invading people's privacy, or the reemergence of the use of government-controlled "Clipper-chip" cryptography, and the control of access to the Internet access and content via licensing fees.

But whether or not this "national security threat" is just hype and a smoke screen for bureaucratic turf wars, or a desire for a bloated government to keep an eye on everyone's business but their own, doesn't really matter. It doesn't matter, because the feds have the ability to declare it "a national security issue," and thereby remove it from budgetary restraint or from public oversight.

A NEW MILITARY "INFORMATION CORPS"

What should matter, though, especially to the online community, are the latest discussions coming out of the National Defense University and other areas to create a new "Information Corps" — an elite military armed-forces developed to mastermind information attacks and countermeasures. Under the cloak of national security initiatives, this group would not act only to defend our borders against alien attacks of aggression; it would also protect the nation's Government from its own citizens.

As it was put in a government white paper entitled *The Electronic Intrusion Threat to National Security and Emergency Preparedness Telecommunications*, "The threat that contemporary electronic

intruders pose to the Public Switched Network and the Internet is rapidly changing and is significant. As a result of their increasing knowledge and sophistication, electronic intruders via the Internet may have a significant impact upon the national security of the United States. In addition, there are now a greater number of current and former telecommunications employees who may be disgruntled than at any time in recent years due to the downsizing and restructuring in the industry. These individuals must be viewed as a potential threat to the U.S. telecommunications networks and to national security, and measures must be taken to assure the security of the networks."

The Department of Defense is so concerned about potential attack, they've set up a Director of "Information Warfare" to plan countermeasures against such an attack — and are actively pursuing the creation of a separate "Information Corps" and "an associated command structure linking military, FBI, and police operations with the intelligence sector to facilitate effective joint operations, promote the information revolution in warfare, and unify the disparate information elements thereby creating a unified interface with civilian information infrastructures." This force would act almost autonomously from the Army, Navy, Air Force, Coast Guard and Marines — reporting directly to the President and the Joint Chiefs of Staff.

The scope of this new force would be to fight the battles of "Information Warfare from the Pentagon war room to the home PCs," according to the Department of Defense. Warriors of the new Information Corps would have at their disposal a growing arsenal of highly sophisticated electronic weaponry — much of it already deployed, but classified. They would be prepared to counter most infrastructure attacks against telecommunications, power and transportation systems, by "foreign economic adversaries or home-grown terrorist groups." They would "manipulate information to catch foreign and corporate agents who are currently conducting via the Web and the Internet, a wide array of covert industrial espionage, trolling for competitive information, stealing proprietary and copyrighted information, and acting via online services and the Internet to disrupt or destroy data and services. They would monitor and counter threats to individual privacy stemming from online commerce, banking and credit-card activities; or online transfer of medical, DNA and individual identification records."

According to the DoD, the Information Corps would work in collaboration with civilian authorities providing intelligence information and support services to nab computer criminals such as the Coast Guard and Navy currently assists the Drug Enforcement Agency (DEA) in interdicting drug runners. But, they would not become directly involved in computer crime cases unless it escalated to a state of information warfare.

COMPUTER CRIME VERSUS INFORMATION WARFARE

What's the difference you may ask? A computer crime is any act that violates the law. But computer crimes can be and are for the most part random, isolated and physically harmless events. Information Warfare, on the other hand, is never random, or isolated — and most often has the potential to kill or maim. The term implies a concerted effort to use information as a weapon by which to wage war, whether it disrupts military, economic, political or social arenas. Thus, the role of the Information Corps will put them right in the face of the typical reader of *Boardwatch* — and it greatly extends the peacetime mission and role of the military in domestic life.

Beginning last June, the RAND Corporation began training federal officials from Defense, the FBI, and intelligence using an all-out cyberwar simulator at their research center in Santa Monica, CA. In the first simulated attacks, unknown terrorists via the Internet were able to cripple the phone system by dismantling high-capacity transmission facilities with trojan horse programs introduced in eight key cities. They then went on to effectively disable the nation's power grid, confuse the air traffic control system causing temporary power blackouts and deadly flight disruptions, and generally wreak havoc with the nation's most vital computer networks. All of this took place within the first few hours — leaving the Pentagon and 70 senior federal officials dumbfounded as to how to respond. The Defense Department held the drill to raise the profile of what they feel is a dangerous, impending and real threat in today's information-based world. (Boy, wouldn't that make a fun computer game. It would probably outsell Doom II.)

CYBERWARFARE RAISES HARD QUESTIONS

As a result of the simulation, each of the military services is updating its own military policies regarding information

warefare. The Department of Defense and the Joint Chiefs are continuing to work out a joint plan for a new service — the Information Corps. But military warfare also raises hard questions. For example, in an electronic environment, what constitutes war — and when does a war begin? How does a government declare war in cyberspace? How does one measure damage and declare a clear victory? How do government oversight committees examine and determine that a cyber-war is under way? Who decides when, where and how offensive information warfare weapons — which the Defense Department admits already exist — are deployed? Who decides on the deployment of countermeasures and manipulation of information in cyberspace by the defense and intelligence communities, and how can any measureable oversight be maintained? In the future, will a systems attack by the U.S. require Congressional approval? At the moment it does not. These are just a few questions that are being hashed out in closed meetings in Washington these days.

In the meantime, the traditional industrial base of the U.S. Department of Defense braces for a new round of consolidations that may scrub up to 80 percent of all defense-related companies, according to the Electronic Industries Association (EIA). But that same organization is making bullish predictions that a number of new business opportunities will emerge over the next three years in the area of "information warfare," meaning that at least some conclusions to these debates has occurred over the past few months.

CYBERWARRIORS NEED RESTRICTIONS

Without oversight, it is obvious that the Executive Branch, the intelligence and defense communities can abuse the weaponry and defense mesh that they have created to maintain the Internet. All responsible online users should contact Congress regarding this unrestricted capability and demand that some form of balanced oversight be enacted immediately. If the Internet is no longer going to be free to the private users, then the same government should work harder to make sure that its own don't go off and start a cyberwar — something those of us that government has been working to regulate could never do. ♦

CDROM'S

Call for a FREE
SYSOP HOT SHEET!
1-800-862-2457

SHAREWARE TITLES BBS READY!

Arsenal Cookbook	\$22.95	NightOwl 18	\$21.95
Arsenal Files 5	\$18.95	NightOwl Windows 95	\$15.95
BBS In A Box	\$44.95	OS/2 Arsenal	\$22.95
Business Library	\$29.95	Personal Financial Adv.	\$19.95
By Popular Request 2	\$19.95	Pier 8	\$21.95
Cream of the Crop 9	\$19.95	So Much Windows 95	\$19.95
Death Match Arsenal	\$19.95	SoundMOD 2	\$17.95
Education for All Ages	\$19.95	Shareware Studio7	\$12.95
Games 95	\$24.95	Simtel MSDOS	\$22.95
Gigia Games 3	\$24.95	Sysop's Arsenal	\$19.95
Math Solutions	\$24.95	Teacher 2000	\$25.95
Monster Media 12	\$23.95	Tech Arsenal 2	\$19.95
Monster Media Win95	\$24.95	Venus Model Search	\$25.95
NEWT For WindowsNT	\$29.95	Windows 3 Pak	\$34.95
NightOwl 17	\$11.95		

MANY more titles in stock!

Call for your free
"SYSOP HOT SHEET"
containing the latest BBS
READY titles available.

Visit "SYSOP WORLD" on the
World Wide Web today at:
<http://www.unirom.com/sysopworld/>

1-800-862-2457

UNIROM

664-A Freeman Ln #449
Grass Valley, CA 95949

1-916-477-8392
Fax 1-916-477-8390
support@unirom.com



Celestial Systems, Inc.

Turn-key System For Internet Service Providers

InterRack® (Internet-in-a-Rack)
a full featured ISP System
ready to provide full Internet access to
your customers. Shell accounts, PPP,
SLIP and Frame Relay accounts.

- Web Server
- Gopher Server
- MIME Compliant E-mail
- Network News
- FAX Gateway
- Supports 300 users and UP

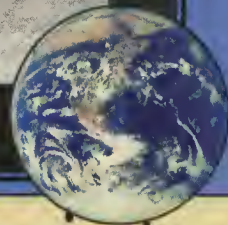
- Security
- Support
- Training

E-mail: info@celestial.com
URL: <http://www.celestial.com>
Phone 206-236-1676
FAX: 206-232-9186

New from NCIT

**the PAGESAT HIGH SPEED
(115KBPS) SATELLITE-
DELIVERED NETNEWS**

**Get all the planet's daily
NetNews delivered to your
domain. Find out why
successful ISP and BBS
operators choose PageSat.**



PAGESAT HS2000 Data Terminal

Using 36 Inch Parabolic Ku-Band Antenna System

FAST

Like having a 115k dedicated leased line just for NetNews.

Current

Continuous realtime feed 24 hours a day, 365 days of the year.

Entire

400 megs daily, 150,000 messages from 18,000 news groups.

Save

No administration headaches. No duplicates to remove.

Profits

**Attract new customers. No charge to feed other sites.
No charge to post to PageSat's news machine.**

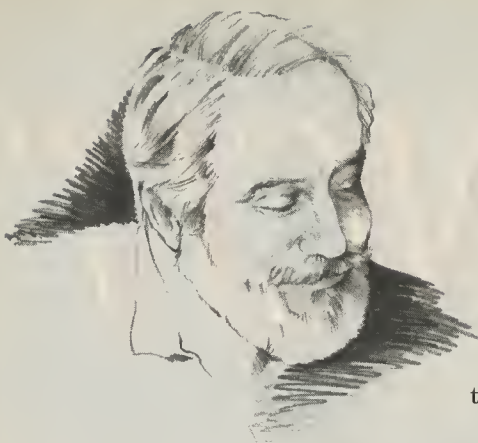
NCIT Satellite - delivered NetNews / Fidonet / E-Mail
Transmitted from NCIT - Northern California International Teleport

NCIT is an Internet Service Provider offering 56K and T1 leased lines.

Contact NCIT at 510/782-9301 • 800/227-6288 • Fax 510/782-9401

E-mail your postal address with fax and voice numbers to — info@pagesat.net —

or visit our website at <http://www.pagesat.net>



GOVERNMENT ACCESS

by Jim Warren

THE NATIONAL WIRETAP SYSTEM

“Government access” is bi-directional —and that can be bad:

The euphemistically titled, “Communications Assistance for Law Enforcement Act” (CALEA, now Public Law 103-414; 47 U.S.C. 1001-1010) was passed by Congress on October 7, 1994. It was quickly —and ever so quietly — signed into law by Clinton on October 25th. But it was not until almost a year later —hidden first by last fall’s monumental budget feuds, then by Bill’s Bosnia adventure and Christmas —that the Clinton administration finally disclosed their initial demands for our new **\$500 million** National Wiretap System, buried one day in the massive *Federal Register*.

BACKGROUND: THE WATERGATE MEMORIAL

On August 9, 1994, the 20th anniversary of Richard Nixon’s resignation after his failed attempt to bug political opponents in their Watergate headquarters, the current administration’s plan to demolish freedom and privacy throughout the nation was introduced in Congress. Nixon must be rolling in his grave with envy.

This Orwellian system was co-authored by Senator Patrick Leahy (D-VT) and now-retired Representative Don Edwards (D-San Jose CA).

At the administration’s pleading, the [Democrat-controlled] Congress rammed it through in less than two months, with no substantive hearings. Literally in the dark of night, without debate, it passed in the House by voice vote and two nights later by unanimous consent in the Senate, only minutes before adjourning to rush home for their important work — campaigning for re-election.

COMMENT PERIOD FOR LOBBYISTS

A year later, forced by law to disclose their plans, the administration finally did so in the October 16th *Federal Register* (Volume 60, Number 199, pp. 53643-53646), over FBI Director Louis Freeh’s name. Also required to solicit public comment, they allowed 30 days for it.

However some important people —industry lobbyists —whined. So, at the last minute, the FBI’s Telecommunications Industry Liaison Unit (TILU) issued a brief notice in mid-November stating that, “the Personal Communications Industry Association (PCIA), the United States Telephone Association

(USTA), and the Cellular Telecommunications Industry Association (CTIA) submitted requests for extensions of time.” They benevolently allowed the comment period to include the holidays —all the way to January 16th.

The TILU was designated to receive the comments, at P.O. Box 220450, Chantilly, VA 22022; (800)551-0336. Of course, they gave no online address; that might encourage real “public” comments.

[The Federal Register Online is available via GPO Access (<http://wais.access.gpo.gov>). This column’s inflammatory comments are based on an excellent analysis of the wiretap law by the Center for Democracy and Technology (<mailto:info@cdt.org>), plus other outstanding online sources of information and advocacy including the Electronic Privacy Information Center (<mailto:info@epic.org>) and Voter’s Telecommunications Watch (<mailto:vtw@vtw.org>).]

THE DEVILISH DETAILS

The details published in the Federal Register are chilling!

It says it’s giving notice of the “maximum capacity,” detailed in the next section, that is, “required to accommodate all of the [wiretaps] that the Attorney General estimates that government agencies ... may conduct and use simultaneously,” within three years.

(Of course, this is only for use by all local, state and federal “agencies that are authorized to conduct electronic surveillance” on or after October 28, 1998.)

Then it emphasizes that the following “capacity figures were derived as a result of a thorough analysis of electronic surveillance needs. Information regarding electronic surveillance activities [were] obtained from telecommunications carriers, law enforcement, U.S. District Courts, State Courts, State Attorneys General, and State District Attorneys to establish a historical baseline of activity.”

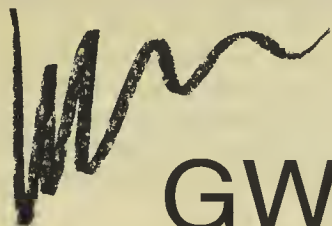
The implication seems to be that the following level of surveillance may already be occurring!

The administration specified the wiretap circuits that it “needs” as a “**percentage of the engineered capacity** of the equipment, facilities, and services that provide a customer or subscriber with the ability to originate, terminate, or direct communications. Engineered capacity refers to the maximum number

May be copied in full at any time, in any form, provided this notice is included and no fee is charged for the specific copy nor for a paper publication of which it is a part.

Warren [345 Swett Rd., Woodside CA 94062; <mailto:jwarren@well.com>] works on technology-related civil liberties and open-government advocacy, and currently serves on the California Secretary of State’s Electronic Filings Advisory Panel.

Warren has received the Dvorak Lifetime Achievement Award (1995), the Hugh M. Hefner First Amendment Award (1994), the James Madison Freedom-of-Information (1994) for his efforts to open online access to government, and the Electronic Frontier Foundation’s Pioneer Award (1992). He founded InfoWorld and the Computers, Freedom & Privacy conferences (1991); was founding host of PBS television’s “Computer Chronicles” (1981) and founding Editor of *Dr. Dobbs’ Journal of Computing* (1976).



TBBS/TDBS programs and More
from the leader in enhancement software...

GWA Services

508-429-8385 BBS
508-429-6227 Voice

Classified Ads

Make extra income by selling classified ads on-line with **The Classified Manager**. TCM will handle an unlimited number of classified ads in an unlimited number of categories. Very configurable, it allows for different rates or even free ads on a category by category basis. — \$129.95

TSTAT

Tstat v2.7 reads the TBBS dayfile.lst activity log and creates reports of system activity.. Tstat reports day/time all lines are busy, calls by bps total and by line, option module and menu loads, files up/downloads, bad passwords. Number of new users, file transfers/aborts by protocol, and much more. Up to 6 custom searches for any occurrence in the dayfile. — \$89.95

SalesMaster ©

The most complete online sales program ever created! You can add sixteen online sales representatives, working 24 hours a day to enhance your sales efforts, for less than the cost of one employee. This easy to install and easy to use software includes inventory control, accounting security, and now full point-of-sale capability so you can use the same software for processing internal sales. If you need a solid and secure sales software or you have a need for a complete sales platform, we can fill those needs with SalesMaster. Whatever you have to sell, SalesMaster can help you with it's built-in marketing capabilities. Call for more information on the only sales package you'll ever need for both inside and outside sales. — \$399.95

Easy Menu Creation for All.

ProMenu, the most popular program for creating menus for TBBS platforms is now generic. Regardless of the BBS or network you are using, if it displays files as menus, **ProMenu** is the program designed to make it easy to create and maintain menus in multiple formats. You create the menu and save it in ASCII, ANSI, ASCII/IBM, RIP, NAPLPS, BASIC and xBase formats simultaneously.

Full Communications Services.

We have been installing and maintaining commercial communications systems for almost ten years and we can easily address all your requirements, from a basic ~~needs analysis that will tell you just what your needs and~~ costs will be to a complete Internet ready system. We can help you learn to maintain your system, we can do any necessary maintenance remotely or we can establish a BBS for you at one of our sites.

TSX-BBS, The "Swiss Army Knife" Platform

For less than you might expect you can install a BBS with full multi-tasking and multi-user capabilities. With TSX-BBS you can run a multi-line BBS with full Internet connectivity, a WebServer, a CD-ROM server, a "door" server and more on a single CPU. And you can allow your users access to programs like FoxPro and Clipper applications on the very same platform. With TSX-BBS you add more CPU power because you need to expand, not because it's required to get started.

Telnet to gwabbs.com or view our WebServer at <http://www.gwabbs.com>

● Pete White (Boston) 508-429-6227

● Toby Schneider (Chicago) 708-298-6919 ● John Schachat (San Jose) 408-267-7176

GW Associates offers over 200 third party programs from more than 30 developers and is the oldest and largest supplier of add-on programs for TBBS. Download the latest listing from the BBS. Most programs can be viewed on-line and many have demos you can download and try on your system.

508-429-6227 voice or 508-429-8385 bbs

of subscribers that can be served ..." [emphasis added].

In other words, the government's wiretap capacity demands are percentages of the maximum number of phone calls that are possible simultaneously in a given phone company switch. Thus, the percentages stated hereafter are much lower than the percentages of the normal number of phone calls — since phone system usage is almost never at maximum capacity, except during major regional disasters.

AT LEAST ONE WIRETAP PER 400 CALLS

The administration "needs" one of three different wiretap capacities in different geographic regions — but didn't disclose which regions must have which capacities.

For the safest, most crime-free areas, the notice demands that, "Each telecommunications carrier must ensure that it can expeditiously increase its capacity ... [to allow] a number of simultaneous ... interceptions equal to 0.25% of the engineered capacity ..."

They "need" to be able to "simultaneously" tap at least one call in every 400 — IF phone use is saturating system capacity!

METRO AREAS: WIRETAP ONE CALL PER 100

For some of "the most densely populated areas, which have historically been areas of high electronic surveillance activity," the Clinton administration is demanding that phone companies be able to "expeditiously increase" wiretap circuits to allow "simultaneous ... interceptions equal to 1% of the engineered capacity ..."

Several weeks after the notice was published, *New York Times* reporter John Markoff got wind of it and reported its details, including the "1%" figure. He reported that this "would vastly exceed the current needs of law enforcement officials around the country, who in recent years have conducted an annual average of less than 850 court-authorized wiretaps — or fewer than one in every 174,000 phone lines." (Note that "engineered capacity" concerns number of simultaneous calls; not the number of phone lines.)

FBI Director Freeh promptly sent a letter saying that "1%" meant "only" one

wiretap per 1,000 — a rather novel interpretation of "1%."

WIRETAP ANYWHERE, FROM ANYWHERE

CALEA demands wiretap circuits, "enabling the government, pursuant to a court order or other lawful authorization, to intercept, to the exclusion of any other communications, all wire and electronic communications ... of a subscriber [and deliver them] to the government ... in a format such that they may be transmitted ... by the government to a location other than the premises of the carrier ..."

No more climbing telephone poles, costly visits to distant switching centers or uncomfortable stake-outs — all of which limited pervasive wiretaps in the past. Wired and wireless communications must be tapped at their origin, but automatically re-transmitted wherever is most convenient for the eavesdroppers.

"OTHER AUTHORIZATIONS?"

The *Times* article said that court-authorized local, state and federal wiretaps averaged less than 850 per year. So, either the administration expects to treat about one person per hundred as criminal suspects, or most of their snoop circuits will be permitted under that other little phrase, "or other lawful authorization."

What other authorizations are there? We don't know. They're secret — including the massive secret "war" powers that Congress has given to the Presidency over the last half century, but never rescinded. And if a superior officer orders a wiretap (for example, CIA spy Aldridge Ames, Ollie North, Nixon's H. R. Haldermann or J. Edgar Hoover), the agent could certainly claim that he was operating under "lawful authorization." ATF and FBI agents made exactly such claims during last fall's Congressional hearings on their Ruby Ridge raid and Waco cookout.

WHO GETS TO SNOOP?

CALEA says "government ... means the government of the United States and any agency or instrumentality thereof, ... and any State or political subdivision thereof authorized by law to conduct electronic surveillance."

This wiretap system ain't just for elite federal troops. It's for local cops (LAPD

comes to mind), rural constables, politicized sheriffs, zealous prosecutors and all local and state agencies with any electronic surveillance authority — as well as the IRS, INS, ATF, FBI, CIA, DIA, the hacker-raiding SS and the high-profit, seizure-eager DEA. Hell, even most park rangers could use it legally!

Let's not even talk about the illicit users — powerful politicians and bureaucrats at all levels, lowly staff making unauthorized use of their authorized access such as the 1,300 IRS employees who have been disciplined for such activities, phone phreaks and computer crackers who figure out how to penetrate the notoriously insecure national phone system, industrial espionage agents such as the French and Israeli security forces who have spied on U.S. firms and passed information along to our foreign competitors, and so on.

\$10,000 PER DAY PENALTIES

This system is not "optional." If a company is "a telecommunications carrier, a manufacturer of telecommunications transmission or switching equipment, or a provider of telecommunications support services" it is required to install the wiretap circuits by 1998, under threat of, "a civil penalty of up to \$10,000 per day for each day" that it fails to do so (with one notable exception, below).

And finally, CALEA also mandates that these snoop circuits be entirely undetectable, implemented, "... in a manner that protects ... information regarding the government's interception."

Curiously, this was not the work of conservative Republicans; it was entirely authored, advocated and enacted by "liberal" Democrats.

With liberals like these, who needs law-'n'-order conservatives?

STOP THE APPROPRIATIONS!

\$500 million is authorized to pay for this disaster. But it turns out that the administration can't spend it unless it's appropriated, and the phone companies don't have to install the circuits unless they're paid.

Contact your Congress-critter — while you still dare to speak. ♦



Seem familiar?



Using your system to sell your customers online time or products can be frustrating. Difficult menus, huge client downloads and all kinds of useless add-ons can make even the thought of online sales pretty ugly.

Now, ProDesign offers two solutions for Worldgroup to give you online sales without the headache: **Zephyr** and **MIDAS**.

Zephyr is a full-featured online shopping mall from Nemesis Concepts, LLC, featuring an intuitive user interface and small client. Payment options include credit cards and checks, and invoices can be sent to the customer via e-mail or fax.

Let's face it, your users are there to enjoy your system, not stare at a progress bar creeping its way across the screen. That's why the feature-packed **Zephyr** client is under 500k, not the multiple megabytes of some other online shopping malls. Plus, the **Zephyr** client is compiled, making it up to ten times faster.



MIDAS makes online subscription sales easier than ever, accepting credit cards or checks for payment. Weekly, monthly, quarterly or annual subscriptions can be automated using **MIDAS'** recurring billing feature, which ships with **MIDAS** at no extra charge. You can configure purchases to be applied immediately, or placed into a debit account for later use.

MIDAS supports interfaces for users running ASCII/ANSI terminal mode, RIP, and Worldgroup client/server. And a client size under 450k lets your users get back to enjoying your system quickly and without a lot of fuss.

Online sales don't have to be a traumatic experience, for you or for your customers. Both **Zephyr** and **MIDAS** offer your users a rich, intuitive interface that makes online shopping a breeze.

So don't fight with your users to give them what they need. Pick up your copy of **Zephyr** and **MIDAS** for Worldgroup today, and see how easy online sales can really be.



PRO DESIGN, INC.

PO Box 14314

Albuquerque, NM 87191-4314

(505) 271-5858 Voice ♦ (505) 271-5845 Fax ♦ (505) 244-0000 BBS

sclement@nmol.com

♦ <http://www.nmol.com/prodesign>





LEGALLY ONLINE

by Lance Rose, Esq.

CYBERANGELS FLAP THEIR WINGS

Lance Rose, Esq. is Of Counsel to Lewis and Roca in Phoenix, AZ, and Co-chair of its Intellectual Property and Technology Group. He can be found on the Internet at <mailto:elrose@well.com> and on CompuServe at 72230,2044. He is also author of *NetLaw*, the online legal guide, published by Osborne/McGraw-Hill and available at better book stores everywhere.

The Guardian Angels first arrived in New York City in the early 1980's. Vowing to make the city a safer place, they wore red berets, patrolled the sidewalks, and faced down muggers. With no official endorsement or permission they operated as a vigilante force, albeit fairly popular with those who were comforted by their protection. Leaders Curtis and Lisa Sliwa became celebrity personalities, and even came to host a radio show. The group eventually spread worldwide, protecting city dwellers around the globe.

The Angels were not popular with everybody, however, especially local police forces. While their professed goal of public safety could barely be questioned, their presumptuous use of police-like powers to make arrests and enforce the peace made people uneasy. No one elected the Angels, and no elected officials appointed them. What was to prevent the Angels from defining crimes as they pleased? Would they clear the streets not only of criminals, but also of people acting entirely within the law, who simply happen to violate the Angels' personal moral code?

Now the Angels are descending upon our Net. They call themselves *CyberAngels*. Really, it's not such a bad name. They could have chosen "Guardian Browsers," or "World Wide Winged Warriors" instead. Naturally, they have their own Web site — <http://www.safesurf.com/cyberangels/> — and can also be reached at <mailto:angels@wavenet.com>.

The question is: are these new CyberAngels really our online saviors, or are they just another gang in cyberspace wearing cockeyed halos? Their own FAQ at their Web site relates that they became involved in online affairs as a result of Curt Sliwa's radio show. After hearing one horror story after another from callers about Internet pedophiles, harassment, child pornography and the like, the Guardian Angels felt the public was imploring them to clean the place up. They decided that, "We should do what we do in the streets. The Internet is like a vast city: there are

some rough neighborhoods in it, including the 'red light' areas. Why not patrol the Internet ... And why not recruit our volunteers from the very people who inhabited this vast CyberCity? ... Never an organization to blame it on, or leave it to the government, we decided to do something ourselves."

Not bad on a mythical level, but is it true? Ever sensitive to new marketing opportunities, it may also be that Curt Sliwa and his lieutenants realized the Web is a new growth area for vigilante groups, one which is not nearly as surely controlled by the official cops as physical locales. By telling us that others asked them to come online, the CyberAngels are asking us to believe that an online constituency legitimizes and sponsors whatever actions they choose to take. This is in itself a useful public relations approach for their purposes, regardless of the true substance or size of any such constituency.

Seasoned Net users may have noticed that in the material quoted above, our newfound Angels already made a basic mistake common to online newbies: they've fallen for the Myth of the Monolithic Internet. Anyone who's explored online knows there is no coherent, completely unified online world, but a vast set of different worlds supported by interconnected wired and wireless systems. The totality of online areas is, in fact, a lot more like the whole of a "city" than the Angels themselves ever intended through their choice of that metaphor.

Sure, there are areas like the CyberAngels' public streets, such

as USENET, anonymous FTP and open areas of the Web. If the original mission of the physical Guardian Angels to patrol dark city streets made any sense at all, then perhaps it's right that their cyber cousins should patrol online public areas, if it can be done right.

But much of what we find online consists of private areas, not public ones. Consider the storefront-type businesses maintained on many computer BBSs; the vast online hotels, conference centers or shopping malls maintained by AOL, Prodigy, MSN, Compu-Serve and others; the personal and group meetings conducted pri-



"The Web is a new growth area for vigilante groups"

vately in BBSs and e-mail mailing lists; and so on. These are not public streets, they are not public anything, they are private places. Do the CyberAngels, through their view of the Internet as one big dirty city, mean to impose their peculiar set of moral values on all private online places as well, regardless of what the owners and users of these places might want?

Setting aside the CyberAngels' simplistic view of the online environment, what are they actually doing online, besides recruiting like-minded Net denizens to join up? Mainly, they seem to be exploring ("patrolling") the Internet and bulletin boards for what they consider to be online abuses, then contacting site administrators and operators to clean up their acts. In their November, 1995 newsletter, the CyberAngels proudly state they contacted 50 sysadmins about supposed child pornography on their systems, asking them what enforcement steps they plan to take. They say repeatedly they want to make sure that administrators and operators enforce their own "terms of service" with system users. Thus, in fact as well as in theory, the Angels are all too ready to dabble in the private matter of how each sysadmin and sysop chooses to enforce its own rules with its own users.

Before going on, let's acknowledge the inevitable objections to any critique of the CyberAngels' project: what's wrong with a bunch of people who call themselves "angels" online, who want to protect kids from bad things on the Internet? If adults running online systems are so irresponsible as to let grotesque and harmful materials be freely available to children, why shouldn't online volunteers try to steer them back into line? Isn't it simply wonderful that in addition to the overworked FBI and state police, we have a principled volunteer group to help keep a little order on the Net?

Sure, what the CyberAngels are doing would be just wonderful — if they weren't also guilty of a jaw-dropping mixture of hubris and naivete that, in its sum total, makes them at least as great a problem as whatever it is they're out to contain or destroy. Their mistaken view that the Internet is one big public place, instead of a mixed bag of public and private areas, was examined above. Here are some more problems with the CyberAngels' philosophy and practice, based on their own FAQ:

"This is netiquette gone haywire."

First, the CyberAngels have a pretty casual relationship to the laws we enact as a society. They frequently act either like they're above the law, or have the right to create new laws for us to follow. The CyberAngels' very first purpose is to "promote and protect the idea that the same laws of decency and respect for others that apply in our streets should apply also to the Internet." Elsewhere, they promote regulation to combat rudeness and flaming.

Since when did "decency" and "respect" become laws, and rudeness and flaming become illegal?

Of course most of us, myself included, sincerely want to see people respect each other online and offline. But what happens if the CyberAngels decide I broke some "law" requiring that I respect others, perhaps by being a tad more rude than they prefer? Will they hunt me down like a depraved wretch and report on my lack of respectfulness to sysadmins the world over? This is netiquette gone haywire.

There are many street-level principles of decency and respect that are not, and cannot be, encoded into laws at all. They gain their moral force precisely in being modes of behavior voluntarily adopted, by mature individuals who understand that people deserve to be treated kindly and fairly in civilized societies.

Another example of the CyberAngels' reinvention of the law is their riff on freedom of speech under the U.S. Constitution. They say, "We are not trying to abolish free speech, but we believe that freedom of speech should not be exercised if by exercising it you are violating someone else's basic rights. . . . No criminal can claim 'freedom of expression' to justify a crime." These statements resonate as richly as the most stirring rhetoric emanating from our would-be Internet regulators in Congress in recent months. Bashing the First Amendment always scores a few popularity points when narrow-minded people just want to clamp down on some unsavory group, without worrying about niceties like maintaining a free society.

But what were those words again? Wasn't it, "Congress shall make no law ... abridging freedom of speech, or of the press ...?" It seems that freedom of speech is itself, in the CyberAngels' words, a basic right. In fact, if the

ISDN

and other BARGAINS!

ISDN terminal adapters from \$49
UNIX workstations from \$250
640 x 480 LCD panels 10.4" \$29
15" color workstation monitor \$99

We BUY, SELL, and TRADE SURPLUS
Computer, datacom, networking, and
electronic hardware. If it's unusual we're
interested.

Fax or email your list for a fast cash offer
email or send SASE for our current catalog

BOB DUCKWORTH CONSULTING
960 Ralph McGill Blvd, Atlanta GA 30306-4447
404-888-0389(tel) 404-892-2301(fax)
email: mde@ko4ybr.atlanta.com

Be An Internet Provider, with:

Internet Provider In A Box

Featuring:
■ SLIP/PPP ■ POP Mail
■ SMTP Mail, ■ WWW Server,
■ Router CSU/DSU, and more,
at a price you won't believe

Call Dome Systems, at
800-800-9679
or (515) 472-2813

Our Website: <http://www.fairfield.com/>



On-Line SEARCH®

FREE TRIAL
OFFER!!

✓ **SEARCH** your family history
on the World-Wide Web!

✓ **OVER 70 million**
ancestor names!

<http://www.everton.com/>

✓ **GENEALOGY** magazine on-line!

✓ **DIAL-UP** also available!

BBS 801-752-6095 (n,8,1, ansi)

Questions: 1-800-443-6325
"Everton's Genealogical Helper"
P.O. Box 368
Logan, Utah 84323-0368

Constitution is to be accorded any respect, then freedom of speech is more basic than most other rights we can name, at least in the U.S. If the CyberAngels are truly concerned with basic rights, then in actuality they should be protecting and promoting freedom of speech. But instead they honor it in the breach. They mouth respect for its principles, but in their actions they oppose people using speech for purposes they don't like.

A second problem is that the CyberAngels want "to help to make unnecessary Government legislation by showing Government that the World Net Community takes the safety of our children and the well being of all its members seriously." Well thank you very much, CyberAngels, but I do not want to be regulated by you, any more than I want regulation from the United States and other governments that have a far greater claim to legitimacy than your own organization. At least the U.S. government is elected by the public, and stands as the public's own self-regulatory body, imperfect though it may be.

In contrast, the CyberAngels are a self-appointed bunch of characters with their own ideas of regulation, and apparently a readiness to apply those ideas to you and me. If the government makes a bad regulation, the popular will can oppose it, and ultimately overturn it. A bad regulation by the CyberAngels is not subject to public opinions. At bottom, the problem here is one of logic: if the CyberAngels wish to avoid regulation, then logically they should simply do what is necessary to avoid it, instead of their actual stance of promoting their own brand of regulation before the government comes around with its version.

Third, the Cyber-Angels want to "pressurize (*sic*) service providers to enforce their Terms of Service." Why in the world do they want to "pressurize" service providers? Don't service providers have enough pressure on them already, without worrying about how many CyberAngels can stomp on the head of a sysop? With this sentiment, the CyberAngels can just get in line with everyone else who believes that online system operators and administrators are responsible for what their guests and the public do on their systems.

The motivation for this stance is obvious enough: if you can scare service providers into controlling those who

use their systems, then you are essentially enlisting those service providers in your own cause, and also deflecting attention away from yourself as the source of distasteful acts toward service users. In other words, the CyberAngels want service providers to act as their proxies in committing censorship and any other kinds of dirty work they may have in mind.

By the way, the "Terms of Service" in that quoted section refers to nothing more or less than the service providers' contracts with their own system users. Up to now, it's been a marvelous feature of contract practice in our country that no party to a contract is required to enforce all of its terms. In fact, we are often pleasantly surprised when we learn that a contract holder has voluntarily refrained from exercising its rights, such as when a bank refrains from foreclosing on a mortgage when a payment is late, or a school refrains from expelling a student who broke one of its rules.

"The CyberAngels want service providers to act as their proxies in committing censorship."

The CyberAngels want to deprive service providers from exercising a similar range of voluntary discretion in enforcing their own rights. If any user violates some contract obligation in a way that bothers the CyberAngels, then the service provider had better eject that user, or face the Cyber-Angels' wrath. Is this any way to run a free country, or to help users enjoy a more comfortable online environment?

Finally, the CyberAngels have opposed anonymity online. "The very anonymity of Users is itself causing an increase in rudeness, sexual abuse, flaming, and crimes like pedophile activity... One of our demands is for more accountable User IDs on the Net." So the CyberAngels also want to make us all carry online passports and traveling papers around with us, so we can't get away with activities that bother them. This, in itself, isn't so bad, as there is a well-established debate

underway about anonymity online, with reasonable positions both in favor of, and against, regulations that would curtail or regulate our ability to act effectively online anonymously. We could view the CyberAngels' position here as no more than weighing in heavily on the anti-anonymity side.

But wait — what's this? In their November, 1995 electronic newsletter, the CyberAngels are now saying, "Special mention must go to an ongoing debate about anonymous remailers, which was an area where we were less informed." Hmmm, it seems the CyberAngels are rapidly changing their attitudes on the topic of anonymity. Why? The ability of online rude boys and evildoers to perform awful acts with impunity remains the same no matter how much you learn about the mechanics of how anonymous remailers work, so there would be no reason there for the CyberAngels to start changing their official position on anonymity. Is there perhaps another reason?

For instance, as the CyberAngels learn more about anonymity, are they perhaps discovering its potential use and power for running their own organization — not just the CyberAngels, but the whole of the Guardian Angels? Anonymity technologies are a powerful way for organized groups to operate outside the view of official national and state governments — why should the CyberAngels be deprived? If indeed they are becoming increasingly impressed with how encryption techniques can enhance their own abilities to slip around government roadblocks, wouldn't it be consistent for them to back down on the supposedly irresponsible use of those same technologies by others? Just a thought...

The Guardian Angels do play a useful role in making public streets safer when there are not enough official police to cover the entire beat. But in their online guise as CyberAngels, they have mutated into an avenging force for censorship, regulation and oppression. It's time to get a clue, guys. For those who live in poor neighborhoods and must walk down dangerous streets just to buy a loaf of bread, the Guardian Angels can do a good service. But no one is forced to walk the public alleys of the Internet, and we don't need vigilante busybodies to tell us how to conduct our private affairs. ♦

THIS IS TRUE™

by Randy Cassingham

OBSCENE AND NOT HEARD: America Online has reversed part of its new policy to ban the “use of obscene or vulgar language” after breast cancer victims complained they couldn’t discuss their disease online now that “breast” was on the company’s “vulgar word” list. “Give us a break! Must we have ‘hooter cancer survivors?’” demanded one woman before AOL started allowing “breast” to be used again. [*“Hooter” was not on AOL’s banned-words list. — Ed.*] “I don’t consider ‘breast’ to be a dirty word,” says a spokeswoman for the American Cancer Society. “If you have people who see it as dirty, for whatever reason, rather than as an everyday term, then this is going to continue to happen,” she said. (AP) ...*Funny: I never thought it was the words that were dirty.*

Give Them What They Want: Sylvia Branzei, a California school teacher, got her inspiration while clipping her toenails. “I said, ‘Ooh, what’s this icky stuff under my toenails?’” she remembers. Then, “it hit me that there’s a lot of gross things about our body that we want to know about.” Just out is her new book, *Grossology*, which explains most everything that oozes, runs, or otherwise comes out of a person’s body. The book even comes with a magnifying glass so children “can analyze their own bodily discharges.” The book is selling well. “I write a book about boogers and farts and I’m sitting on a gold mine,” Branzei says. “I never thought this was what America wanted.” (AP) ...*She hasn’t been to very many movies lately, then. [...or visited Chris Babb’s Nutsite© of the Month! — Ed.]*

Take Off Your White Coat: Karen Hopkin admits she “had the idea for the calendar so that I myself could meet guys.” But it’s not just any beefcake calendar: Hopkin is the producer of NPR’s “Science Friday” show, so her calendar is “Studmuffins of Science.” “If you have a Y chromosome and a Ph.D., you could be Dr. December!” she advertised. “For the sake of science, you have to do it,” said Dr. September’s wife, when he told her he had won one of the 12 spots in the calendar. Dr. September — Brown University researcher Robert Valentini — thinks the idea “is to make science and medicine more approachable... to make scientists look like real people instead of nerds in the lab who have white coats and play with mice.” (AP) ...*At least, that’s what he told his wife.*

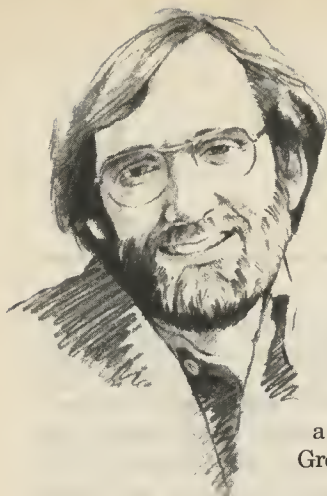
SAFE SEX: London International Group Plc, one of the world’s largest manufacturers of condoms, has taken to the Internet. Their “Ins and Outs of Sex: everything you ever needed to know about condoms and safer sex” web site at <http://www.durex.com> offers “an interesting, fun and interactive way to learn about condoms, romance and safer sex, while educating them about the benefits of Durex condoms,” a spokesman said. (Reuter) ...*Who would bother with online sex? You can’t type when you only have one free hand.*



Aw, Shoot: Game Warden Joseph Dedrick could hardly wait. On his day off, he went quail hunting, and bagged a bird. But, a friend noted, pointing to a game department brochure, quail season doesn’t start for another week. “I called my lieutenant the next morning and told him, ‘We’re going to have to get a warrant on me,’” Dedrick says. He charged himself with hunting out of season, and was fined \$25 plus court costs. (AP) ...*Now there’s a cop who won’t buy any excuses.*

For the Birds: “My entire life has changed from joy and happiness to sadness and depression,” says Ruby Campagna of Roanoke, Va. She enjoyed watching baby birds in a nest outside her apartment window. But the apartment manager, Judy Woody, made a practice of removing bird nests from the property. Campagna filed suit when Woody removed the nest by her window. Woody, “a malevolent scowl on her face,” knocked the nest down then stepped on it “in order to mutilate and mangle their tiny bodies,” her suit said. Woody says she didn’t know there were baby birds in the nest when she knocked it down, but a Roanoke Circuit Court jury awarded Campagna \$135,000 for her “emotional distress and medical bills”. (AP) ...*Is that compensation for distress, or an award for creative writing? ♦*

Copyright 1995 by
Randy Cassingham
(mailto:arcie@
netcom.com), all
rights reserved.
Randy’s book *This
is True: Deputy
Kills Man With
Hammer* can now be
ordered from your
favorite bookstore.



EDUCATION LINK

by Rea Andrew Redd

EDUCATIONAL REFORM GROUP MINES THE INFORMATION SUPERHIGHWAY

The Internet: Your Lesson in Navigating the Information Super Highway, a video tape by The Educational Reform Group, Wilton CT, 1994, 60 minutes, VHS.

Chuck Drake, IBM's 1992 Teacher of the Year, is the host on the Educational Reform Group's (ERG) how-to video on the Internet and classroom instruction. The audience for this tape is just ordinary folks. Cleverly produced with probably a modest budget for graphics, this sixty-minute tape is attractive for several reasons.

For unconverted but potential Internet users, it doesn't cover too much material, but gives just enough to make them appreciate the possibilities of the Net's impact on classroom instruction. In fact, the setting is a high school science classroom and a computer lab. The immediate impression the tape makes is that Chuck Drake, a successful high school teacher, would like to share one of the secrets of his success with you. On the tape, elementary and high students give brief, enthusiastic testimonies of their delight with the Net; teachers give realistic, not overly glowing, short reports of how the Internet has improved their teaching. The bottom line with these students and teachers is that they become independent learners. Yes, of course, the Internet allows for an interchange of ideas and cultures, but the end result is that the teacher guides the students to become independent researchers.

The tape is a comprehensive treatment of the basics but doesn't overwhelm or bore the audience. The Internet's history, connecting to the Internet, E-mail, Gopher, Telnet, Archie, FTP and Mosaic are each given ten minutes of coverage. The video's goal is to make the viewer conversant, not an expert, on the Internet. This is not a video produced by a Disney-sized corporation; it gives the feeling of "hey, these people are just like us, even the guys who produced it." As such, this video is probably one of the best for convincing teachers, school board members, and parents for meeting the need of integrating the Internet into classroom instruction.

You can e-mail Chuck Drake at mailto:cdrake@mason1.gmu.edu or voice phone The Educational Reform Group at (800)638-9434. You may also wish to fatmail them at 76 Glenview, Wilton, CT 06897. The video tape is available for rent or sale; you'll need to ask the ERG for the latest terms on rentals, purchasing, and shipping.

MEMO FROM THE DEEP POCKETS DEPARTMENT

The Pacific Mountain Network has released a cassette of the Far View/Star Schools audio conference entitled "Funding Opportunities of K-12 Distance Learning Programs." This summer, 1995 conference audio tape is packed with national funding sources, private funding trends and sources, and key points of writing a strong grant proposal. The panelists are well respected experts in their field. Ken Salomon is a partner in a law firm specializing in education and public telecommunications law; he discusses the best of the best federal funding sources; Arlene Krebs consults in the areas of educational telecommunications and satellite communications, distance learning and new media; she presents the private funding trends and sources portion of the conference. Sheila Cassidy is an instructional technology and curriculum specialist; in the past five years she has located **\$16 million** for the educational programs that she has helped design. She offers insights on the grant writing process.

To obtain an audio cassette copy of this valuable audio conference, and its follow-up materials contact Molly McGill at the Pacific Mountain Network, 1550 Park Avenue, Denver, CO 80218; her voice phone number is (303)837-8000 and her fax phone number is (303)837-9797.

YAHOO! IN PRINT



This winter, one the most heavily used web sites has reversed a trend. Instead of the Internet and CD ROMs eliminating the printed word (as some librarians speculate they will), Yahoo! — <http://www.yahoo.com> — has issued a print version of itself. Listing the top 5,000 of the 100,000 sites in the Yahoo! index, eight authors have added **Yahoo! Unplugged** to bookstore and library shelves across the world. The thick tome's list price is **\$39.95**; a CD ROM is included in the package. It was little over a year ago that the founders of Yahoo!, Jerry Yang and David Filo, started up their Web site; they are a couple of Ph.D. candidates who turned their Web-surfing hobby from a dissertation avoidance habit to a full-time profitable business. A year ago Yahoo! had one meaning (Yet Another Hierarchically Official Oracle!) now it has another meaning (You Always Have Other Options!).

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: red@genesis.dug.edu

ELECTRONIC HIGHWAY CROSSING GUARD



CompuServe's Spry division — <http://www.spry.com> — has weighed into the market "parental control." *Internet in a Box for Kids*, with a retail price of \$30 for a Windows version, contains the essentials a parent or teacher needs to give the elementary and middle school child reasonably safe access to the Internet. The package includes a service connection, WWW browsing software, detailed instructions, a video for kids, a subscription to Free-Zone (a kid's chat room), home page construction software, E-mail, and a subscription to Surf-Watch, which filters sites to make sure that they are suitable for the age group.

THE DICKENS



The Chatback Trust announces a project for all schools in the world and in particular those classrooms with special needs students. Charles Dickens (yes, the famous one) is the moderator of an interesting literary online project. He answers questions about his life and work in London, England during the reign of Queen Victoria, spanning most of the 19th century. If you recall, Charles Dickens' own career spanned from being a newspaper reporter covering the crime beat to being a best-selling author travelling throughout the U. S. and Europe several times in his career. Says Dickens:

"I must confess that my own schooling was a haphazard affair, interrupted as it was by my father's unfortunate brush with extreme debt. I am confident that your modern method of instruction through the computer and modem will prove more congenial to young people. I need not, at least, trouble my head about attendance in my classroom, which must be a great boon to both instructors and instructed."

To subscribe to this list, <mailto:listserv@sjvm.stjohns.edu> the follow-

ing: **subscribe boz <your name>**. For further information write to the moderator, Mr. C. Dickens, or to the Director of Chatback, Thomas Holloway — <mailto:t.holloway@warwick.ac.uk> or visit the WWW site <http://www.tcns.co.uk/chatback>. For more on Victorian lives and letters <mailto:charles.dickens@tcns.co.uk>

AN INVITATION FROM BELGIUM

Dr. Hubert Christiaen, Belgian coordinator for the European Schools Project, enjoys the Chatback Trust's chatroom moderated by Charles Dickens and invites correspondence at the following address; telephone 32-(0)16-32 70 75, fax 32-(0)16-32 79 97, <mailto:Hubert.Christiaen@kc.kuleuven.ac>, Fidonet 2:292/872.3, and <http://www.kuleuven.ac.be/~hchrist>, fatmail Dr. Hubert Christiaen, Kandidatuurcentrum, Celestijnenlaan 200A, B-3001 Heverlee, Belgium.

CYBER COUPONS



It had to come sometime; I look at it as the Internet adding to the economy in a good way. E-Coupons, Inc., a Michigan based business, has uncovered a new way to make money on the Net. Students at the University of Michigan can now clip coupons off their computers. Campus merchants, such as the usual music and book stores, coffee-houses and restaurants, pharmacies and clothing stores, are buying space on e-Coupon's web page — <http://www.e-coupons.com> — to advertise and place discount certificates. Over 120 Ann Arbor merchants have signed on and e-Coupons, Inc. hopes to add 50 more campuses this year and reach 200 by 1997 for a combined coupon-clipping student and faculty audience of 2.5 million. I have to admit, this sounds like a good part-time/franchise opportunity for school teachers, who need to fill out their incomes in evening, weekend and summer hours.

ANOTHER REASON GEOGRAPHY TEACHERS SHOULD USE THE NET

Last month we used the example of a geography teacher using Classroom Connect's *Educator's World Wide Web Tourguide* and once again we've gotten more lesson plans for geography teachers.

Enhanced graphic tools for the Web have allowed detailed views of cities, including locations of buildings, civic sites, and natural features. Because maps on CD Roms are out-of-date in as little as months and usually within a year or so, two vendors of maps on the Internet have come into existence. Easily updatable, Net maps have the other advantage of being downloaded and, of course, printed out.

Argus Technology, of Alberta Canada — <http://www.argusmap.com> — and Net Strategic Mapping of Santa Clara CA — <http://www.stratmap.com> — each offers a particular geographic service. Argus database holds maps of the world, and in particular, United States city maps with side streets, hotels, theaters, restaurants, and office buildings. Net Strategic Mapping offers a line of Web tools which allow the user to create maps of their own sites. What better way to impress the principal and school board than by having the geography class construct an accurate, local community map on the school's Web page. Also, geography teachers who pester the American Automobile Association for state and national highway maps so that students can construct the ultimate vacation that covers a region or even all fifty states can now take the students to the computer lab and do it all on the Internet.

K-12 NET BROWSER

When you need a sponge activity (something to use up the last ten minutes of class time when the usual forty/fifty minute lesson got finished in thirty minutes), try showing the students the Beatles. Life Magazine's Web page — <http://pathfinder.com/Life/lifehome.html> — has a gallery of 1960's and 1970's photographs of the Beatles and 1990's shots of surviving musicians all taken by Linda Eastman MacCartney. Another good sponge or reward Web site is the National Basketball Association's page — <http://www.nba.com> — which has a page for each team with videos and sound clips, schedules, ticket information, printable scorecards for television viewers, and probably this year all-star balloting.



GOLD

BUSINESS

"When beginning a new project, I start with NTTC's Business Gold. It is a key source for locating technologies and expertise within the federal laboratory system."

— ROBERT W. PRICE
CALIFORNIA DESIGN

The National Technology transfer Center's electronic bulletin board service, Business Gold, is your Quick, convenient access to the research and development programs of the federal laboratories.

- ☐ No connection, usage or download charges
- ☐ Current information on technologies available for commercialization
- ☐ Up-to-date directory of federal laboratories
- ☐ Specialized environmental technology section
- ☐ SBIR, STTR, ATP and TRP solicitations
- ☐ Federal, state and local funding and assistance programs

DIAL-UP BULLETIN BOARD

- ☐ Set data bits to 8, stop bits to 1, parity to None, emulation to ANSI and login as guest
- ☐ 300-2400 baud modems dial (304) 243-2561
- ☐ 9600 baud modems and higher dial (304) 243-2560

INTERNET CONNECTIONS

- ☐ Telnet iron.nttc.edu, login as guest
- ☐ Ftp iron.nttc.edu, login as anonymous
- ☐ Gopher iron.nttc.edu
- ☐ World Wide Web URL <http://www.nttc.edu>

For help or more information on Business Gold, call 800-678-6882



NATIONAL TECHNOLOGY TRANSFER CENTER
Wheeling Jesuit College
316 Washington Avenue
Wheeling, WV 26003
Fax: 304-243-2539

Do you have bored government students? Do they talk more about the afternoon soaps than the American constitution? Court TV has a Web site — <http://www.courtstv.com> — which a database on attorneys (what have Cochran and Shapiro, Clark and Darden done since the O.J. Simpson trial?), legal proceedings (whatever happened to Jeffery Dahmer's brain?), and legal library (how many times can the Menendez brothers be tried if this is another hung jury?). For that end of the quarter extra credit assignments for which about 50% of your students ask, send them to Third Millennium's Web site — <http://www.debt.org> — which has an online meter running which posts the national debt. After they read the meter, have them take the quiz on how the Federal money is spent. The site also has a databank of documents relating to government expenditures and is also linked to the Social Security Administration and the Concord Coalition, a grassroots political action group founded by national congressmen Paul Tsongas and Warren Rudman.

Do any of your students ski or snowboard? Are they thinking about it and talking about it while you are trying to make a different point? Reward them for their attention to you and get them busy with the National Ski Patrol at <http://www.skipatrol.org> or the Ski Map Server at <http://www.cs.umd.edu/~regli/ski.html>, Snowlink at <http://www.sportsite.com> or USENET groups rec.skiing.alpine and rec.skiing.announce.

How about cars and rap music? Visit AutoNetwork at <http://autonet.com> or DCTALK at <http://www.dctalk.com/>. Some of your students interested in a career in business? Get a glimpse into the world of employment with a visit to IntelliMatch at <http://www.intellimatch.com> or have your students find out what it takes to buy an existing business or franchise in the franchise/business marketplace set up by Post Net at <http://www.accessnv.com/postnet>. You can have your student find out how businesses sell products to other businesses and also investigate the career of commercial buyer when they visit Frontier Corporation at <http://www.frontiercorp.com>. ♦



San Francisco

August 7-10 1996

ONLINE NETWORKING EXPOSITIONS
Presents

ONE BBSCON 1996 in San Francisco

Call now for more information
on attending and exhibiting at this year's
hottest online show!

Intensive and timely educational seminars
Access to industry authors and innovators
New products introduced
New features unveiled
Exhibitor show discounts and promotions
Internet and dial-up terminals
Hospitality suites and parties

1996 ONE BBSCON
Moscone Convention Center
August 7 to 10, 1996

For information please mail or fax to:
ONE, Inc. 4255 South Buckley Rd.,
Suite 308,
Aurora Colorado 80013
voice (303) 693-5253
fax (303) 693-5518

GLOSSARY

bps — Bits Per Second - a measurement of data transmission speed.

CGI — Common Gateway Interface, an Application Program Interface (API) peculiar to the UNIX operating system which allows a **Web server** to pass data from an HTML document to a CGI script, which runs various programs as necessary and returns resulting data for display over the **Web**

COM port — Serial ports on the IBM PC compatible computer, usually, but not always used for data communications, are referred to by system designators COM1, COM2, COM3...etc.

Conference — An group of public messages on a Bulletin Board System, usually focussed on a particular topic and often moderated by a conference host or moderator who guides the discussion. Also called Folder, SIG (for "Special Interest Group") or Echo. See also **Newsgroups**.

cps — Characters Per Second - characters usually referring to a single 8-bit byte of data. With start and stop bits, a total transmission of 10 data bits is usually required to transmit a single character or data byte.

CSU/DSU — Customer Service Unit/Digital Service Unit. A hardware device that provides a digital interface to high-speed leased lines (see **T1**). Looks and acts like a modem, and all too many people call it a "digital modem." However, a CSU/DSU does not **MOD**ulate or **DEMOD**ulate analog (voice) signals; it deals with digital signals from end to end.

DNS — Domain Name Service, a two-column look-up table system of matching mnemonic machine names such as **boardwatch.com** to their numeric IP addresses (**204.144.169.1**). The tables are maintained at local, regional, and global levels by various organizations, making it easier for humans to find their way around the Internet or their LAN.

Echomail — collections of public messages shared by multiple BBSs. A message entered on one BBS in an echomail conference will be "echoed" in corresponding conferences on any

number of BBSs which choose to receive the same conference. Replies from users on all member systems are likewise echoed to all participating systems.

FAQ — Frequently Asked Questions - a file established for many public discussion groups containing questions and answers new callers often ask.

Finger — an application program which will search a particular machine connected to the Internet for a specified entity and return any information about the fingered entity that may be stored on the machine's **finger server**. You need to supply a search string, e. g., **finger hakala@boardwatch.com**, which includes the full **DNS** name of the specific machine. Therefor finger does not help you learn where a given entity connects to the Internet, but you can learn which people use a given site. See also **ping** and **whois**.

FTP — File Transfer Protocol - an application program that uses TCP/IP internetworks as a medium for transferring files. You can logon to an ftp site using an ftp program and transfer files from their site to your local desktop using a **GET** command. Many sites allow **ANONYMOUS** ftp. At the login prompt, enter **ANONYMOUS** as the login name, and at the password prompt enter your e-mail address as password. You will have access to a limited number of public directories from which you can retrieve files.

Example: **ftp boardwatch.com**

Home page or **Homepage** - the top-level hypertext document in a collection of linked **HTML** documents. Often, the document implied in a **WWW** site's **URL**, e. g. **http://www.boardwatch.com/homepage.html** is generally rendered as **http://www.boardwatch.com**.

HTML — Hyper Text Markup Language, the programming language used to create **WWW** pages and define the functions to be performed when one clicks on a button, image, or hypertext link embedded in the page.

HTTP — Hyper Text Transport Protocol. The method by which the World Wide Web provides hypertext links between web pages - often located on entirely different machines.

IP — Internet Protocol. The underlying packet protocol used to connect networks over the Internet.

ISDN — Integrated Services Digital Network, an all-digital telephone system specification. Basic Rate Interface (**BRI**) consists of two 64 Kbps bearers or "B" data channels and one 16 Kbps supervisory "D" channel, leading to the designation "2B+D." **BRI ISDN** can deliver data to the home at speeds up to 128 Kbps by combining the two B channels and is the only digital telephone solution capable of using *existing* copper wire to the home.

ITU — International Telecommunications Union - a standards body operating under the aegis of the United Nations to standardize telecommunications protocols for interoperability. Replaced the earlier **CCITT** group.

JPEG — Joint Photographic Experts Group - a standard for compressing digital photographic images.

KB — Kilobyte - 1024 bytes - often generically applied to 1000 bytes as well.

Kbps — Kilo Bits Per Second - a measure of data transmission speed indicating 1024 bits transitting in one second.

LDS — Long Distance Service - a long distance telephone company such as MCI or Sprint.

LEC — Local Exchange Carrier - local telephone company.

Mbps — Mega Bits Per Second - a measurement of data transmission speed indicating 1024 kilobits per second or 1048576 bits per second.

MB — Megabyte - technically 1024 kilobytes or 1,048,576 bytes - but often applied to the more rounded term of one million bytes as well.

MOSAIC — A World Wide Web interface program available for Windows, Macintosh, and UNIX X-Windows that provides a graphic multimedia interface for WWW home pages.

MPEG — Motion Picture Experts Group - a standard for compressing digital video images.

Multiport serial board — a plug-in card that extends the number of **COM** ports an IBM-compatible computer can simultaneously support beyond the factory-standard two. Enables running more than two serial devices at the same time, as in a multi-line BBS. Typical configurations offer, 4, 8, 16 or 32 ports on a single card.

Newsgroups — collections of e-mail messages arranged in a hierarchical topic structure and distributed to computers all over the Internet. Users of sites that receive newsgroups can elect to receive particular newsgroups, add messages to the shared message base, and thus join several global special interest groups. There are currently over 12,000 USENET newsgroups available.

NNTP — Net News Transfer Protocol - a protocol used to transfer USENET News Groups from one Internet site to another via Internet Protocol.

Null modem cable — a cable whose connectors are wired so as to permit serial port transfers of data between computers as if they were communicating via modems. Data transfer speeds may reach 115 **Kbps** over null modem cables between IBM-compatible PCs.

Ping — an application program that will tell you if a particular entity is presently connected to the Internet. Useful in diagnosing connection problems or checking up on employees who should be working instead of playing Doom. See also **finger** and **whois**.

POP — Point of Presence - in the telephone world this is the geographic location of a particular switch or service.

POP3 — Post Office Protocol - an alternative mail protocol used to service intermittent dialup connections to the Internet whereby mail is held until the caller makes the connection and requests mail. Most SLIP or PPP dialup account users will receive mail from a POP3 account using a program such as PC Eudora.

PPP — Point to Point Protocol - a type of Internet Protocol used via serial connections by modem. A dialup connection providing IP connectivity. Developed later than Serial Line Internet Protocol (SLIP) to accomplish the same intermittent dialup connection function.

Protocol — A system of rules and procedures governing communications between two devices. File transfer protocols in your communications program refer to a set of rules governing how error checking will be performed on blocks of data.

QWK — File extension for bags created by Quick Mail - a standard for offline mail readers.

RBOC — Regional Bell Operating Company - a provider of local telephone service such as U.S. West or Bell Atlantic.

Router — A device that connects two or more networks, such as your LAN in Boise and mine in Chicago, at the network layer. "Also," according to Bernard Aboda's *The Online User's Encyclopedia*, "an expensive device manufactured by hi tech firms with inflated stock prices."

Server — a computer dedicated to providing specific services to **client** computers. Print servers, for example, do nothing but accept, store, and print out jobs sent to them by other computers. An **FTP** server is dedicated to file-suckers everywhere.

Shareware — computer software which users are encouraged to copy and distribute to others, and to evaluate for a specified or indefinite period of time. The author gives the user a license to "try before you buy," and requires voluntary payment of a specific sum of money if the user continues to use the software. Failure to pay the requested fee is a legal violation of the author's copyright rights.

SLIP — Serial Line Internet Protocol - an implementation of IP over serial ports/modems - usually on an intermittent dialup basis. Developed by Rick Adams of UUNET Technologies, SLIP is a predecessor of the Point to Point Protocol (PPP) also used for dialup IP connections.

SMTP — Simple Mail Transfer Protocol - the most common method for relaying electronic mail over the Internet.

T1 — A classification of leased telephone line service offering 23 voice channels and 1 supervisory channel or 1.544 Mbps digital data service.

TCP/IP — Transmission Control Protocol/Internet Protocol. The basic packet protocol used to connect machines globally on the Internet is referred to as the Internet Protocol or IP. The Transmission Control Protocol (TCP) interacts with IP to provide an application protocol interface. The term has come to generically refer to a family of protocols used to connect local area networks to one another, forming an internet, and more specifically the global internetwork referred to as The Internet.

TELNET — An application program that allows users to interactively logon to menued services provided at TCP/IP Internet sites.

Example: **telnet boardwatch.com**.

UUCP — Unix to Unix Copy Program - a series of programs and algorithms used to transfer files, and electronic mail by dialup modem. Many bulletin boards provide e-

mail/newsgroup access by using UUCP to connect to an Internet provider, and are not actually connected to the Internet by IP.

URL — Uniform Resource Locator - a system of references to different Internet sites indicating the both the site and type of protocol or application program used to reach it: e-mail, ftp, http, gopher, etc.

Example: **http://www.boardwatch.com** indicates a Hyper Text Transport Protocol address on the World Wide Web (WWW) with location **www.boardwatch.com**.

USENET — Users Network, one of the earliest networks of computers which exchange e-mail conferences via the Internet using **UUCP** and **NNTP**. Properly capitalized in full but often rendered as "Usenet." Estimated to include over 70,000 nodes, 12,000 newsgroup conferences, and 2 million readers.

V.17 — International standard for facsimile transmissions at speeds up to 14,400 bits per second.

V.32bis — International standard for modem data communications at speeds of up to 14,400 bits per second.

V.34 — International standard for modem data communications at speeds of up to 28,800 bits per second.

V.FC — V.Fast Class - a pre V.34 proprietary modem modulation standard for 28.8 kbps connections developed by Rockwell International and Hayes Microcomputer Products.

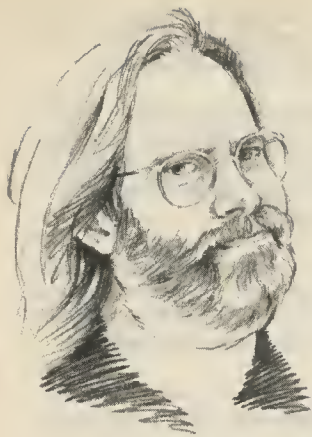
Web — See **WWW**.

Whois — an application program which queries any of several **whois servers** to locate information about a given Internet user. The command **whois hakala**, for example, may retrieve the full name, geographical and e-mail address, voice phone number, and other information about any Hakalas who have Internet accounts. See also **ping** and **finger**.

WINSOCK — A Dynamic Link Library (DLL) program for Microsoft Windows that provides a simple program interface to TCP/IP services. Originally developed by Net-Manage, Inc., it has become the model for most Windows based Internet application programs. The most widely used WINSOCK.DLL would be the shareware program TRUMPET Winsock. Internet application programs then use WINSOCK for TCP/IP services.

WWW — World Wide Web - a network of graphical hypertext servers linked by The Internet offering graphics, sound, text, and in some cases video clips providing information.

ZIP — File extension for files catalogued and compressed using Phil Katz' PKZIP compression utilities. ♦



BEGINNER'S LUCK

by Doug Shaker

MOTHRA'S BACK ON THE WEB

Do you remember the old fable about the grasshopper and the ant? In it, the grasshopper has a great time, fiddling the summer away while the ant works its tiny little butt off, storing food. When winter comes, the grasshopper dies of starvation and the ant lives off its pile of stored food. In my marriage, I am the grasshopper — outgoing, flamboyant, and always putting off work until later if I can play today. My wife is the ant — planning, taking care of details, and uncomfortable talking to groups of people.

This grasshopper had planned on spending this month installing and implementing a BBS based on a beta version of *Worldgroup for Linux* software that Galacticomm has lent me. It really looks like nice stuff, but setting it up requires planning and thought. And, true to my grasshopper nature, I fiddled around instead of reading the docs and getting down to business. Then, towards the end of the month, I got four or five e-mails asking "What's happened to your web page?" In that same space of time, I only got one e-mail asking, "Where's your BBS?"

"Great," thought I, "I can fool around with web server stuff and cite market demand as the reason." Yes, this kind of decision making is fuzzy-headed and inadequately grounded in reality, but if you think it gets any better in most major corporations, you haven't sat in on the meetings where they made the decisions. Read the comic strip Dilbert (<http://www.unitedmedia.com/comics/dilbert/> or your local newspaper) for further education in these sophisticated management techniques.

Backed by this massive investment into marketing research, I've just spent the last three days trying to edit my web page and get my web server up. Of course, it's been a typical computer task. I'm sure we all do these things the same way. I read the shortest version of the instructions that I can find, do all the steps that seem obvious, fudge the ones that seem ambiguous, then see if it works. If it doesn't, then I go back and dink around with stuff — mostly the stuff I didn't understand in the first place — until I either get it to work or find something that looks like a bug.

If I find a bug and it is commercial software, then I call up support, wait on the phone for an hour or so while they try everything that you tried, and then get all embarrassed when they point out that page forty of the big manual (the one I didn't read) clearly states that **FOOTSIE.DLL** must be installed in a subdirectory of a subdirectory of the main application directory and that the full name of the file path to it cannot be more than 64 characters long. Of

course! Why didn't I think of that? I'm so sorry to have taken up your time!

However, if I find a bug and it is free software, then I can't call support. Instead, I dink around some more until it either works or I give up. Since I don't have any more money in my BBS/web server budget, I am pretty much limited to using free software or free add-ons to commercial software.

Most of the HTML editors are pretty sad. The majority of the free HTML editors are really plain text editors that just make sure you put in both sides of a tag pair — no WYSIWYG editing and not much help in finding the tag that you need. Some free HTML editors, for example SoftQuad's *HoTMetaL* Free (see <http://www.sq.com/products/hotmetal/> for more information), will show you some of the text formatting that your tags will induce, but not all. *HoTMetaL* 1.0 was pretty bad in this respect — not much better than a simple text editor. *HoTMetaL* 2.0 is much better and comes pretty close to a WYSIWYG editor.

However, when I started my web page, I didn't know about *HoTMetaL* 2.0 and the closest thing I had to a free WYSIWYG editor was Microsoft's *Internet Assistant for Word*, version 1.0z. It is an add-on to Microsoft Word for Windows 6.0 and it is available from Microsoft via <ftp://ftp.microsoft.com/deskapps/word/winword-public/ia/wordia.exe>. When you install it, it modifies your copy of Microsoft Word to add a web document mode. In this mode your copy of Word becomes both a web browser and an HTML editor. It isn't all that great at either task, but it's still better than the vast majority of the HTML editors.

I needed to do a bunch of work on my home page before it could be put back on the Net. I loaded Word and Internet Assistant and started flogging my web page into shape. I wanted parts of my catalog to look like this:

Product	List	My price
Gadgets	\$100	\$96
Do-hickeys	\$129	\$119

Under HTML, you have to put stuff like this between a `<PRE>` marker (which turns on the pre-formatted text mode) and a `</PRE>` marker (which turns it off again). If you don't put this kind of text inside a set of PRE markers, you can't use tabs to make the prices line up vertically.

This was easy to do with Internet Assistant for Word. You just select the text, open up the style menu,

Doug Shaker runs a one-person mail-order business supplying Smalltalk software to Smalltalk developers. He started his BBS in early 1995 as an adjunct to his business. He wishes he knew what he was doing, but he sees no chance of that happening anytime soon. You can send Doug e-mail at doug@smalltalk.com or you can connect to his BBS at (415)854-5581. You may also telnet to his BBS at <bbs.smalltalk.com>. Doug has five modems, four computers, three phones, two children and one wife. They keep him busy.

select "Preformatted," and everything will change to courier font. Then you just put tabs in to line the prices up. Everything looked great. But if I closed the document and re-opened it, the pricing section of the catalog would look like a single tabbed line of text. The line breaks had gotten eaten.

Here is an approximate summary of my actions for the next four hours. Insert line breaks (shift-return in Word) at the end of every line. Leave Word, load Word. Take a look. Nope, the line breaks are gone. Did I screw up? Try inserting them again in the first ten catalog entries. Leave Word, load Word. Didn't work — the line breaks are still gone. Look up the correct HTML for a line break. It's
. Browse the Word help file to find out how to enter arbitrary HTML into the document. Insert
 at the end of the first ten catalog entries. Leave Word, load Word. Great! The first ten entries look OK! Insert
 at the end of all catalog entries. Leave Word, load Word. Everything is OK! Do some text editing. Save the document. Leave Word. Eat lunch.

Go back to do more editing. Load Word, load the web page. Uh-oh! Some catalog entries no longer have the line breaks. Repair those. Leave Word, load Word. The ones I just fixed are OK, but some more are screwed up now. Repair those. Leave Word, load Word. Still others are screwed up now, including some that I just fixed. Decide that this software doesn't know how to deal with the
 tag. Convert all the
 tags to paragraph breaks. Leave Word, load Word. Most entries are OK, but some are messed up. Fix the messed up ones. Leave Word, load Word. More are messed up including some I just fixed. Repair everything and save. Leave Word. Copy file to a diskette and carry over to Mothra, my web server and Linux box. Use the Netscape web browser to look at the file. It is OK there. Whew! Finish editing using a text editor on Mothra.

While this procedure worked, I don't think I really want to use it every time I need to edit an HTML document. Next time, I think I will try out HoTMetal. Nevertheless, all this fooling around did get me a home page to put up on the web.

Now all I needed to do was to get a web server configured and up. I have a Linux

(clone of UNIX) box, so this should be relatively easy. But it wasn't. It never is. I don't know why I think that it will ever be easy, but somehow hope springs eternal in the grasshopper breast.

I started out by looking for the web server daemon on my system. It wasn't anywhere obvious, but after looking in ten directories or so, I did a global find on Mothra's file system and found a file with the name **httpd**. However, there was no documentation on it anywhere in the system. Hmm. What to do next?

Although there are lots of free UNIX web servers, most people use either the CERN web server or the NCSA web server. My guess was that I had one of them. If I knew which one it was, I might be able to use one of my web books to configure it. There is a UNIX command that is helpful in situations like this. It is called **strings** and it looks at an executable and prints all of the ASCII strings inside the executable. It will print out every error message, prompt, and screen dialog in there. It's a bit verbose, but if you patiently page through all the output, you will usually find the version number and sometimes a lot more. I did it to my executable and, after 15 pages of garbage, found that it was the NCSA server, version 1.3.

I looked in one of my web books, *How to Set Up and Maintain a Web Site*. It had instructions for the installation of the NCSA server, but it also said there was a serious security bug in version 1.3 and that I should never use it. I apparently had to use 1.4 or later. Sigh.

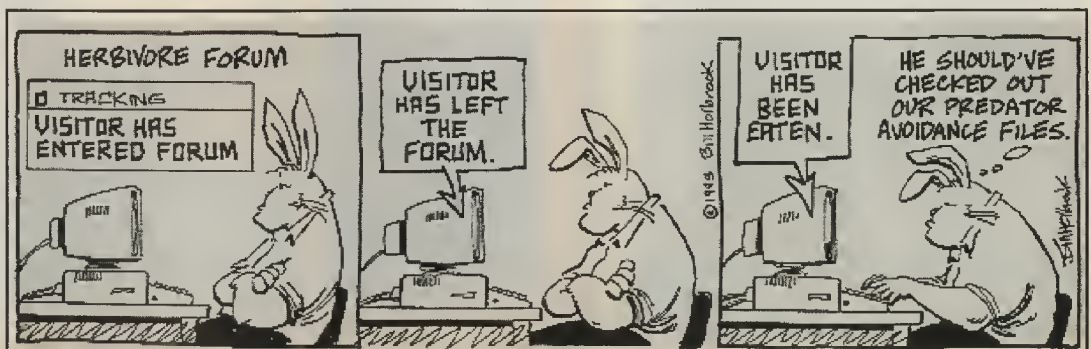
I FTPed to NCSA (<ftp://ftp.ncsa.uiuc.edu/Web/httpd>), and got the newest version of their web server, version 1.5a. I compiled it on my system without a hitch. Yes! Maybe I was on a downhill roll, now! I read the briefest configuration document I could find. Most of the configuration consisted of telling it where to put its log files and where to find its web pages. It took about 15 minutes. All right!

Then I started up the **httpd** daemon — OK, so far. I fired up my Netscape web browser and fed it my URL — <http://www.smalltalk.com/welcome.html>. No joy. It would wait for five minutes and then tell me "Alert! Unexpected network read error. Connection aborted." Well, well, well — that's informative. What the hell am I supposed to do about that? Network read error? What could that be? I tried loading the welcome page into the web browser as a local file, avoiding the **httpd** daemon, and it loaded fine. It ain't the page that's the problem — it must be the daemon.

I dinked around with the configuration file for several hours. I tried adding slashes to the ends of directory names, removing slashes from the ends of directory names, changing directories, changing the files, changing the file names. Nothing, nothing, nothing.

Finally, I tried one bizarre thing. Under UNIX clones, you can run **httpd** as a standalone daemon or as a program invoked by **inetd**. If you run it standalone, it runs all the time and so serves pages faster to people browsing your site. If you run it as an **inetd** slave, it will only load when someone browses your web site. This will save resources on your machine, but will make it slower for your users. I tried switching from a standalone configuration to an **inetd** configuration.

This still didn't work, but it did do something interesting. When I tried to browse my site, instead of getting my web page, I got the error messages that the web server was generating as if they were the web page. I found out that the web server was unable to write to the log file directory and was stalling, waiting for file access to write its logs, as soon as I asked for anything. I changed access permissions for the log directories and everything started working.



Finally, I posted a notice to one USENET newsgroup that my web server was back up. Within the next 24 hours I had 200 hits on my server. Yow! It took me 2 months to get that many users on my BBS. The net is a powerful thing — even if it is just a little frustrating trying to get it to work.

resources:

The book that I use to tell me about HTML is *The HTML Sourcebook* by Ian S. Graham (John Wiley & Sons, Inc., ISBN 0-471-11849-4, \$29.95). The book that was most useful to me when I was setting up my web server was *How to Set Up and Maintain a World Wide Web Site: The Guide for Information Providers* by Lincoln Stein (Addison-Wesley, ISBN 0-201-63389-2, \$29.95). A close second was *Serving the Web* by Robert Jon Mudry (Coriolis Group Books, ISBN 1-883577-30-6, \$39.99).

The version of Linux that I use is from Yggdrasil Computing in San Jose, California. Their Linux CDROM set costs about \$40. Call them at 408261-6630 or <mailto:info@yggdrasil.com>. You could also FTP the files from <ftp://ftp.sunsite.unc.edu>, but I don't recommend it. You will end up with a lot more than \$40 worth of hassles and connect time bills. If you buy from Yggdrasil, get *The Linux Bible* at the same time. It is a nicely printed volume of help files for Linux that you could download and print yourself. But it's only \$40 - why bother?

Although this has little to do with the web, I have a book recommendation. If you like science fiction and if you haven't read *Snow Crash* by Neal Stephenson (ISBN 0-553-56261-4, \$5.99), rush out and get a copy. It is a great read and it offers a reasonable look at what the Internet may become in ten or twenty years. It also has some bizarre and untenable speculation on a virus that crosses the boundaries between biological hosts and silicon hosts, but ignore that. It's still a good read. ♦

DIRECTORY OF INTERNET SERVICE PROVIDERS

IT'S HERE!

The *Boardwatch Magazine*
Directory of Internet Service Providers is
for anyone who wants to get connected to
the Internet now or stay connected to it
for the least cost.

In addition to
the provider
directory the
Boardwatch
Magazine
Directory of
Internet Service
Providers also
contains
valuable infor-
mation on:

Detailed instruc-
tions on how to
get connected to
the Internet

Why get on the
Internet

How to configure
hardware to get
on the Internet
and how to use it
once you're there

The history of the
Internet, its
current trends
and where it's
going in the future

How many people
are really on the
Internet and who
they are

and much more!

The *Directory of Internet Service Providers*, for the first time ever in a printed source, contains the most comprehensive information you can get about the Internet. The heart of the Directory is over 4,000 listings of Internet Service Providers nationwide. The directory is designed to help you find an Internet Service Provider...fast. Organized for easy reference by area code, it details everything you need to know about an Internet Service Provider including location, voice telephone number, e-mail address and world wide web address. It also includes the services they provide and most importantly their prices!

All this for only \$6.95

Available March 5, 1996 where ever you
find *Boardwatch Magazine* or order by
phone for \$6.95 (plus \$3.00 S&H).
Call today 1-800-933-6038

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

Offer SLIP/CSLIP/PPP Connectivity through your BBS!

Major TCP/IP by Vircom is the first TCP/IP solution to provide Pass-Through SLIP directly on The MajorBBS and Worldgroup. Now you can offer your users accounts which can directly provide them with Full SLIP/CSLIP/PPP connections allowing them to use their favorite WEB Browsers. MajorTCP/IP is a proven solution being used by over 750 systems worldwide. It also offers your users Telnet, Rlogin, FTP, and Finger. Users can also telnet into your BBS from anywhere in the world! An SMTP gateway allows your users to send and receive Internet E-Mail virtually instantly. Major TCP/IP also supports DMA which allows you to create virtual BBS's composed of several systems. Call and ask us for details.

Major TCP/IP Combo Version - \$700.00
20 User Worldgroup w/Major TCP/IP - \$1295.00

Get All Your Worldgroup Needs With One Easy Phone Call!

DCS is an Authorized Dealer for DataSafe, High Velocity, Sirius, ProDesign, Logicom, Labyrinth, East Side Computing, Jabberwocky, Infinetwork, HighWaterMark, & HumanWare.

Contact us for Fractional & Full T1 Connections.

COMPUTONE
Corporation

Worldgroup 8-User.....	\$CALL!
User 6- Packs.....	\$CALL!
Entertainment Collection.....	\$175.00
Major Gateway/Internet.....	\$175.00
Fax/Online.....	\$175.00
Search & Retrieve.....	\$145.00
Client/Server Developer's Kit.....	\$249.00
HWM Caller-ID Module.....	\$100.00
HWS UPS Shutdown.....	\$ 79.95
Infi-Base.....	\$495.00
CyberTank.....	\$395.00
Form Manager.....	\$165.00
Trade-Wars 2002 (multi-user).....	\$400.00
Auto Wars.....	\$ 59.00
StoryLand.....	\$ 50.00
First Class Mail (mass mailings).....	\$ 99.00
Let's Get Personal Dating Registry....	\$ 79.00
GTEK Blackboard-4 (w/Cables).....	\$215.00
GTEK BBS-550 (w/Cables).....	\$395.00
GTEK Blackboard-8.....	\$515.00
BOCA-16 Port (w/Cables).....	\$349.00
ISK 115K - 16 port.....	\$ 1650.

The IntelliServer is an expandable asynchronous communications server that combines the functionality of a high-performance terminal server with the extended communications capabilities of an Internet access device. It can be connected directly to a TCP/IP Ethernet LAN, and requires no special operating system device drivers. It is actually a compact, self-contained RISC workstation complete with 20MHz MIPS-R3000 compatible CPU, 2-4 MB of RAM, resident multi-tasking operating system, and menu driven interface. The IntelliServer has an impressive list of security and configuration features. Users can be automatically logged onto a specific host, offered a menu of host connections, or given access to the menu and shell. If desired, passwords can be defined for specific users and for administrators. IntelliServer's standard feature list includes full PPP, SLIP, and CSLIP support permitting IP devices to be connected over RS-232 serial ports at up to 200Kbps. This offers an ideal solution for sites that wish to implement cost-effective remote access, Internet access, and LAN-to-LAN connectivity. Each 16 port IntelliServer can be expanded using low cost 8-port and 16-port expansion modules. A single IntelliServer can support 64 physical ports, and up to 32 PPP/SLIP connections. These are ideal to run in conjunction with MajorBBS and Worldgroup by bringing in all users in via TCP/IP. This does not have the load normally associated with polling modems at high speeds.

Please call for pricing, configurations and availability.

Digital Consulting Services, Inc.

P.O. Box 2142 - Secaucus, NJ 07094

(800) 899-2002 Sales (212) 697-7340 Support

Call to request our Free Catalog!

We accept MasterCard, VISA, American Express & COD Orders





MACINTOSH NEWS

by Bill Gram-Reefer

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. His Online Services column appears monthly in *MicroTimes*. His amateurish web page can be accessed at <http://worldview-bbs.com>. E-mail Bill at reefer@worldview-bbs.com

If you want the low-down on PCI-based serial-port cards then you may want to subscribe to *Mac PCI Serial Insider*. It is published by Megawolf, Inc., a new player in the Macintosh multi-port serial card market. As Ward McFarland, MegaWolf's technical director explains, "Since there is so little information to be found about the subject of Mac PCI serial expansion, we've started a 'hopefully' informative newsletter on the topic." The fact that it is also a promotional vehicle should not detract from its utility. Megawolf will be releasing a high-end PCI serial-expansion card real soon now. Megawolf, Inc., (203) 562-1243 voice/fax; <mailto:ward@megawolf.com> (Ward McFarland via Internet).

MAKE YOUR SITE A CONEY ISLAND OF THE WEB

One of the un-Macish things about life on the web and telecommunications in general is that it isn't as easy as it could be. My rule of thumb has been, if I've got to use *ResEdit* to tweak a resource or adjust some setting then it is not a product I want to mess around with at that level. Some products, like *TeleFinder* that I've been using for years, require you to delve into ResEdit, for example, to change your settings file. Hey! There are some places a History major should just not visit. ResEdit is one. On the HTTP side of the net, CGIs are another place I don't like to frequent.

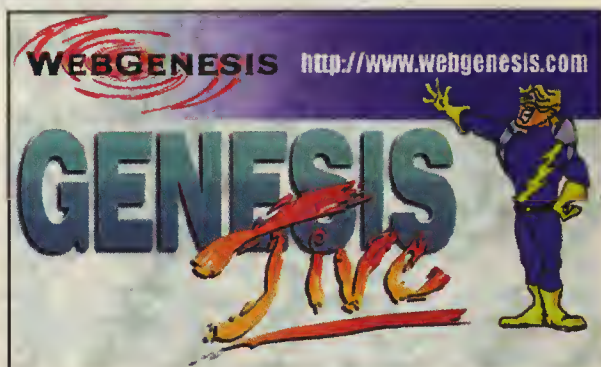
NetCloak

For sure, I've been able to cobble together a decent web site, nothing that fancy, really. Until now, I've left all of the sophisticated CGI stuff to *NetCloak* by Maxum Software. You can download a copy from <http://www.maxum.com>. NetCloak lets me count hits, throws a local date and time up to the viewer, and maybe lets me know which URL the user just came from, so I can better determine which web sites are better referral sites than others. Now, it would take me a month of Sundays to figure that out on my own. Hat's off to Maxum. By the way, Maxum's NetCloak can do even fancier stuff than I currently have bandwidth for, including throwing up time-sensitive pages, or random lists, so you could put a less formal look to your pages after business hours, for example, or have your list of 1,000 favorite URLs be shown as a list of 20 chosen randomly by the hour so your page is always changing. Contact: Maxum

Software, 820 South Bartlett Road, Suite 104, Streamwood, IL 60107; (708) 830-1113 voice; <mailto:info@maxum.com>

But I don't go there. Not yet. Sounds like ResEdit to me. My eyes glaze over just thinking about it, don't yours?

So, like Ferlinghetti, I've been waiting for a rebirth of wonder, if not renewed simplicity to come to this supposedly easy-to-use world-wide-web business. What I mean by that is I've been waiting for more companies like Maxum to offer their own versions of some common gateway interfaces and offer these as standalone, pretty much out of the box software products with real tech support. And, with the appearance of *WebGenesis*, it appears the lovers on the Grecian Urn may just catch up with each other and finally embrace.



WebGenesis' current crop of programs can add a bunch of neat functionality to any web page running any Mac-based HTML server. GenesisJive (\$295) is billed as a full-featured conferencing system, but it isn't. It's a very good first try implementation of a non-IRC-based Chat. Since the chat activity takes place via HTML forms and documents, no Internet Relay Chat helper applications are needed, just a web browser. You can implement graphics, archives, and toggle capabilities on and off easily. When I used the chat function on the WebGenesis demo page, I actually had to push a "button" to listen and another button to "talk," not a very natural interface given my propensity not to listen and to interrupt. This scheme reminds me more of ham radio or the current crop of Internet telephone applications more than chat. Still serviceable, over and out.

Two other truly usable applications from WebGenesis include registration and surveys. *WebRegistration* (\$195) provides a high-speed database designed solely for the registration of users, a first for Macintosh. WebRegistration allows for unlimited user names

and passwords. Registered users can search the database for their own information to change name spellings or passwords. GenesisRegistration prepares all user data for importing to any database for analysis or other massaging. The software has a plug-in capability with WebStar security realms, allowing webmasters to secure sites and pages from undocumented users.

GenesisSurveys (\$195) gives webmasters the ability to publish live surveys on their web sites for fun or for demographic data collection about your users. GenesisSurveys can support any number of surveys, quizzes, or user questionnaires. Webmasters can also predetermine an unlimited number of answers available for each question. The statistical analysis for all responses is computed automatically and can be shown to users as well as stored for export to some other database. The surveys are all on HTML-based forms. Branching questionnaires are supported as are a variety of push-button, radio-button, letter-picking capabilities for the respondents to choose from.

As much as these programs add functionality to your web site and are as easy to use as they promise to be, they are an interesting mutation in the continuing evolution of HTML pages trying to provide the interactivity of bulletin board systems. What's really going on here is the "Is it Web, or is it BBS?" debate. Sure, IRC isn't the best way to do Chat on the net. But HTML may not be any better. So be prepared for a variety of answers to this Web as BBS or BBS as Web debate.

But for that dark discussion, let's not go there, either. Instead, I encourage you all to go to the WebGenesis web site and checkout the chat, survey and registration capabilities described above. You can download them all from that site — <http://www.webgenesis.com> — and use them for a limited period before you actually buy. WWW. WebGenesis Inc., 409 College Avenue, 2nd Floor, Ithaca, New York 14850; (607) 255-5565 voice; (607) 255-7722 fax; <mailto:product-info@webgenesis.com>

Like I said earlier, my web pages are not at the front of the class. Why? Because I refuse to learn any more of HTML as a markup language than I have to. So, unless I can buy that expertise in an off-the-shelf package (see above) you won't find any fancy image maps, fill-in forms with text or check boxes and pop-up menus, no roll-your-

own CGIs, nada. I've looked at scads of supposed HTML editors and, if you're O.K. with living in a crack and doing what you can yourself without becoming a Mr. Potato Head they all seem to be more trouble than they are worth. ClarisWorks' stab at it was a complete waste of time. Putting links as footnotes! What were they thinking of?



So along comes **PageMill**, Adobe's web authoring software for the Macintosh at \$99. What I like about it is you can drag and drop a lot of elements and place them where you want and PageMill does the rest in terms of creating an accurate source document.

Plus, the tool bar provides a lot of functions that to date have required separate programs including those to make images transparent or in generating an image map. I also like the notion of a built-in browser to preview your page instead of having to launch Netscape. Who would have thunk? Best of all, even if you do know HTML, so does PageMill. What that means is you no longer have to worry about your own bad typing, misspellings and, other, HTML proficiency lapses.

Released around the same time as PageMill is **SiteMill**. With it you can easily rename pages, move files, break links, delete files. In short, SiteMill helps you edit your pages and the references they have to other elements, images, pages and sites without all of those "Error 404-Not found" messages. SiteMill repairs all links as you edit or move files. In addition, it reads existing Web sites and automatically finds and summarizes the errors already present there. So, in addition to the PageMill functionality, you get overall web site control as well. Adobe Systems, 1585 Charleston Road, Mountain View, CA 94039-7900; (415) 961-4400 voice; (415) 961-3769 fax; <http://www.adobe.com> ♦

Your Credit Card Processing Solution!

SUPERIOR BANKCARD SERVICE

We Serve all Types of Merchants
Quick & Easy Application Process

Low Processing Rates

Personalized Service

24 Hour Customer Support

**P.T.C. Software Allows you to Process
Credit Cards by Personal Computer**

1-800-776-4002
<http://www.securepay.com>

Now Available

SecurePay

Real-Time & Secure Internet Processing
Superior Bankcard is a Registered Agent of
National Bank of the Redwoods, FDIC insured Santa Rosa, California

Business Software for Online Services, Web & BBS

<http://www.mmb.com>

info@mmb.com

(310) 318 5302

mmb development corporation

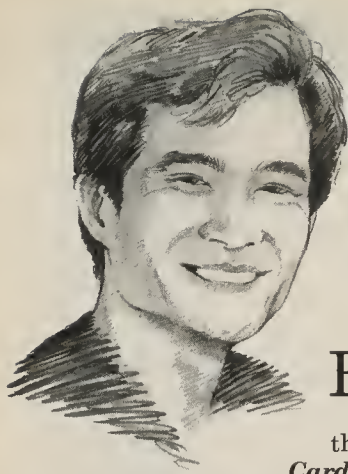
voice (310) 318 1322

List of BBS List Keepers

This listing comprises a list of those who compile and maintain lists of bulletin boards, either by topical category, or by some geographic area or definition - often by area code. The primary bulletin board system where the list can be downloaded electronically is also included.

BBS LIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
New Jersey BBS's	Scott Drake	T.E.R.N. BBS	(201)399-4772
Connecticut AC 203	Kevin Brook	Creative Edge BBS	(203)743-4044
BBS With Handicapped Focus	Bill McGarry	Handicap News BBS	(203)926-6168
Manitoba Canada AC 204	Victor Laking	Generic BBS	(204)475-5199
West Washington AC 206	Bob Dinse/Nanook	Eskimo North	(206)367-3837
Tacoma Washington AC 206	Richard Langsford	AmoCat BBS	(206)566-1155
Puget Sound Area AC 206	Art Tomlin	Orion Station	(206)675-0565
Kitsap County Washington	Michael Schuyler	Quicksilver BBS	(206)780-2011
Modesto CA AC 209	Dennis	The Connection BBS	(209)549-7980
Tracy CA AC 209	James Arnold	The Sinking Ship	(209)833-3615
Stockton AC 209	Monty A Gonzales	The Wrong Number BBS	(209)943-1880
San Antonio TX AC 210	Donna Murrell	Main Complex BBS	(210)658-8009
Graphical User Interface BBS	David Shapiro	The Gooney (GUI) BBS	(212)876-5885
96 List - 9600+bps BBS	Ken Sukimoto	Downtown BBS	(213)484-0260
Employment BBSs	George Smith	Executive Connection	(214)306-3393
Dallas/Ft.Worth BBS List	Mark Elson/Mike Shockley	Blues Cafe	(214)638-1181
Open Access UNIX Site List	Phil Eschallier	LGNP1 (login:BBS)	(215)348-9727
Cleveland Area 216	Jim Barry	Flip Flop	(216)951-9134
Educational and Indiana BBS	Joe McIntosh	KSI Public BBS	(219)626-2150
Conservation/Nature BBS List	D.Wendling/JS Christianso	Coin of the Realm	(301)585-6697
Ham/Amateur Radio BBS	Stan Staten	3WINKs BBS	(301)590-9629
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357
Desktop Publishing BBS	Frank Atlee	Infinite Perspective	(301)924-0398
Delaware AC 302	Vince Boehm/Dave Osburn	Talk Radio BBS	(302)429-7667
Colorado AC 303/719	Willis Morrow	Big Boy's BBS	(303)458-3832
Cave Exploration BBSs	Douglas L. Moore II	The CatEye BBS	(304)592-3390
South Florida Area 305/407	Eric Thav	Silicon Beach BBS	(305)474-6512
Southern California	Mike Hefferman	SOCAL Corner	(310)422-7942
California AC 310	Jim Walton	Illusions BBS	(310)804-3324
Detroit AC 313	Tom McEachern	Wonderland BBS	(313)274-3531
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
St. Louis AC 314	Beth Brooks	Fire Escape's Dir	(314)741-9505
ASP BBS Member List	Richard Holler	The RoadHouse BBS	(317)784-2147
Engineering Related BBS	Arthur Petrzalka	Computer Plumber	(319)337-6723
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
Alberta AC 403	Stephen Decarie	T-8000	(403)246-4487
Calgary Alberta AC 403	Jeremy Birkett	The Quantum BBS	(403)252-5119
Atlanta Area 404	Online Atlanta Society	OASIS	(404)627-2662
Oklahoma City AC 405	John Burton	The SandBox	(405)737-9540
Montana Area	Jay Michalik	Valley Light BBS	(406)273-6399
Searchlight BBS Systems	Chad Payne	Montana MediaNet	(406)549-6325
Orlando BBS List AC 407	Lenny Lacuy	Infinite Space Onlin	(407)856-0021
San Francisco Bay Area	Mark Shapiro	BABBA BBS	(408)946-8592
Baltimore BBS Area 410	David Fogle	Silver Streak BBS	(410)254-3400
Pittsburgh AC 412	Chas Stokes	Zuul's Catacombs	(412)264-9787
Milwaukee AC 414	Mark G.	The Castle	(414)327-5085
North America Nudist List	Patrick O'Brien	Natural Connection	(414)426-2110
Toledo Ohio Area 419/313	Ryck Zarick	Toledo's TBBS	(419)475-2241
Arkansas Area 501	Bob Underdown	The Blue & The Grey	(501)444-8420
Louisville KY South IN	Tim Arnold	Dance of Shiva BBS	(502)893-6360
Portland Oregon BBS	Lisa Gronke	DawGone Disgusted	(503)297-9145
New Mexico AC 505	Dan Kiehl	MDC Computers BBS	(505)434-0258

BBS LIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
Apogee/ID/Software Crtns List	Dan Linton	Software Creations	(508)368-7139
PCBoards on Internet	Ruben Melo	ponyXpress BBS	(508)587-7669
Worcester MA AC 508	Charles Grosvenor	Information Society	(508)832-7542
Corpus Christi	James Cordani	Treasure Island	(512)241-8358
Austin Area AC 512	John Foster	Camel's Back BBS	(512)243-0077
Selected BBS	Joseph Caplinger & Son	J&J's BBS	(513)236-1229
Free Shareware AC 516	Harold Stein	Long Island Exchange	(516)271-5303
516 AC, 800 numbers, Freenets	Wilton Virgo	Long Island BBS	(516)338-8595
Area Code 517 - Mid-Michigan	Rick Rosinski/SAMM	Wolverine BBS	(517)695-9952
518 AC	Dave Hitt	Electric Avenue	(518)899-3292
Phoenix AC 602	Sue Widemark	Cheese Whiz BBS	(602)279-0793
Cochise County Arizona	Kevin McCrory	The Commo Shack BBS	(602)452-0587
Arizona and Southwest U.S.	Michael	BBSouthWest	(602)820-7861
New Hampshire	Mike Maggi	Marios Birdhouse	(603)226-0467
Victoria/Vancouver AC 604	Mark Morley	Island Net	(604)477-5163
Kentucky AC 606	Jon Hagee	Kentucky Explorer	(606)271-1451
Wisconsin 608	Jim Wargula	JW-PC Dataflex.HST	(608)837-1923
New Jersey AC 609	Dave Schubert	The Casino BBS	(609)485-2380
Real Estate Boards	Ted Kraiss	Dealmakers Online	(609)587-4651
New Jersey Area 201/609/908	Wayne R. Morton	Praedo BBS	(609)953-0769
Medical Issues BBS	Edward Del Grosso	Black Bag	(610)454-7396
Job Search and Inet hot list	Ward Christman	Online Opportunities	(610)873-7170
Minnesota Twin Cities AC 612	Barry Watson	Abiogenetic BBS	(612)774-8454
Apple II BBS	Mike Shecket	Way Out	(614)436-4846
Business/Professional BBS	Dennis Hauser	Delight The Customer	(616)662-0393
Female Sysops	Brenda Donovan	The Pacific Rim	(619)278-7361
San Diego, CA AC 619	Tom Grigg	ComputerEdge	(619)573-1675
San Diego AC 619	Joe Nicholson	General Alarm	(619)669-0385
Apple II BBS with Internet con	Morgan Davis	pro-sol	(619)670-5379
Virginia AC 703/804	Eddie Gebhard	PC Power House	(703)348-1423
OS/2 BBS Systems	Pete Norloff	OS2/Shareware BBS	(703)385-4325
Genealogy Related BBS	Richard A. Pence	NGS-CIG	(703)528-2612
Charlotte, NC AC 704	Blaine Schmidt	Moobasi Optics, Inc	(704)522-1018
Black Run/Oriented BBS	Arthur "Rambo" McGee	BDPA BAC BBS	(707)552-3314
Chicago	Peter Anvin	Royal Swedish Viking	(708)491-9036
Gay & Lesbian BBS List	Billy Kennedy	Risqilly BBS	(708)495-6609
Airline Pilot/JUMPSEAT BBSs	Rex Chadwell	ChicAgo Hangar	(708)980-1613
Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS	(713)530-8875
Korean BBS	Wayne Jeong	Korea America Online	(714)449-9373
Rochester NY AC 716	Tracy Logan	Logan's Run	(716)328-2914
RIP BBS Listing	Mario Mueller	Antarctica BBS	(717)755-2440
717 AC BBS Listing	Adam Viener	Cyberia	(717)840-1444
NYC AC 718 & 212	Michael Muller	Tree Branch Online	(718)739-5845
Vermont BBS's	Russ Boyce	Computer Ser. of Ver	(802)334-7976
Ecology/Conservation BBS	Bob Chapman	EarthArt BBS	(803)552-4389
Central California AC 805	Larry Honore	His Board	(805)652-1478
Wildcat! BBS	Jim Harrer	Wildcat! HQ	(805)873-2400
Oahu Hawaii	Brent Davis	Land's End BBS	(808)499-2527
Detroit AC 810	Donald Quarles	Bad To The Bone	(810)749-3581
Technical Support BBS List	Gary Barr	Digicom BBS	(812)479-1310
Pinellas/Tampa Florida AC 813	Emery Mandel	Mercury Opus	(813)321-0734
Kansas City Area 816/913	Bob Zumbrunnen	PC-HELP BBS	(816)331-4703
Dallas Fort Worth	Mark Robbins	Second Sanctum	(817)467-1175
Denton, TX AC 817	Walter Bowen	Mezzanine BBS	(817)565-9165
Occult BBS	Phil Hansford	Mysteria	(818)353-8891
Commodore 64/128/Amiga BBS	John Rigali	Night Gallery	(818)448-8529
Texarkana BBS List	Rodney Payne	Internet Connection	(903)793-7173
Internet accessible BBS's	Richard S. Mark	Dragon Keep	(904)374-3500
Durham Region-Ontario Canada	Chuck Cirvec	Odyssey Systems	(905)579-9241
Alaska AC 907	Patti Johnson	Alaska Pirate Soc.	(907)248-9364
Travel Related BBSs	Robert Southwick	AK Information Cache	(907)373-3205
Kansas 913 Area Code BBS's	Chuck Baslock	On-Line Connection	(913)587-0241
Sacramento AC 916	Jackie Kuhwarth	24 Street Exchange	(916)448-2483
Darwin National US BBS List	Bob Breedlove	Bob's BBS	(916)929-7511
OS/2 Related BBS	Dave Fisher	LiveNet 1:170/110	(918)481-5715
Tulsa Oklahoma Area BBS List	Linda Hargraves	ACCESS AMERICA	(918)747-2542
Raleigh NC AC 919	Mike Stroud	Micro Message Svc.	(919)779-6674
National ISDN BBS list	Ken Morrison	Digital Velocity BBS	(919)992-3059
Republic of South Africa	Henk Wolsink	Catalyst BBS	27-41-51-3406
Switzerland BBS List	Cesar Keller	The Warehouse BBS	41-1-492-5157



BIG BOARD BRIEFS

by Wallace Wang

REACH OUT AND TOUCH COMPUERVE FROM YOUR PHONE

Ever want to access CompuServe news and e-mail without lugging around a laptop computer all day? Now you can, thanks to CompuServe's new **CallingAll Card** service. The CallingAll Card looks like an ordinary phone card but surprise! By dialing a toll-free number and punching in a private identification code, you can access your e-mail along with the latest news and weather reports from any Touch-Tone phone in the United States and more than 40 countries.

By listening to a voice-recording and punching in the right numbers, you can have CompuServe send any e-mail or news reports to the nearest fax machine where you can read your e-mail or news at your leisure. To help weed out irrelevant e-mail messages, you can select what type of e-mail reaches your special CallingAll Card e-mail box, such as "high priority" messages or messages from certain people.

Initially the CallingAll Card service will only print your e-mail or news reports to a fax machine, so if you don't have access to a fax machine, you'll be out of luck. However, future plans include a text-to-voice translation so you will be able to hear the CompuServe computer reading your e-mail and news reports to you.

The CallingAll Card service will be available internationally, with toll-free access in more than 40 countries, early in the first quarter of 1996 (which means by the end of 1996, they should have most of the bugs ironed out). The service will be included free as part of your \$9.95 monthly CompuServe membership fee, which will include 20 free minutes of access for the first month. Of course, while the card will be free, you must still pay a \$0.25 per minute fee if you actually use the card.

With innovations like this, maybe CompuServe has a chance of surviving the harsh online service market after all. Then again, such innovations might just sap CompuServe's energy away from their real customers. After all, how many people really want to listen to the latest news over a public phone when they can pick up a local newspaper for 50 cents instead?

PRODIGY ADDS MORE SHAREWARE

In an effort to boost their pitiful offerings of available shareware programs for downloading, Prodigy now provides access to C|net's **Virtual Software Library** at <http://vs1.cnet.com> which houses an extensive collection of shareware files. This Web link will give Prodigy members access to more than 140,000 downloadable shareware files such as the usual games, fonts, utilities, multimedia players, and demo software.

Then again, Prodigy members could access more than twice that number of shareware files if they just switched to CompuServe or America Online instead. Or just skip the online service world altogether and go straight to the Internet through a local Internet provider. If this is Prodigy's big plan to attract more members to their service, it's about time Sears and IBM decided to rethink Prodigy's focus if they plan to survive much longer against CompuServe, America Online, the Microsoft Network, and the wealth of information buried in the Internet.

AMERICA ONLINE JOINS FORCES WITH INTUIT

America Online has joined forces with Intuit's private network, the **Quicken Financial Network**, to deliver secure bill payment and online banking with 19 banks, including Citibank, Chase Manhattan, Union Bank, and Wells Fargo. Through this combined network, America Online members will be able to transfer money between accounts, check balances, and pay some bills as well as access American Express accounts.

Besides belonging to America Online, members need to use a personal-finance package to access the network. While Intuit would love for everyone in the world to buy and use Quicken to access their network, other personal-finance programs may also allow you access to the network, including Microsoft's own Money program.

Accessing the Quicken Financial Network won't cost you anything extra, but individual banks can set their own fees (so it still might cost you extra, but you won't be paying America Online the money.) Eventually, Intuit hopes to connect to the Microsoft Network as well, allowing Intuit to dominate the online financial market so thoroughly that even Microsoft will have to follow their lead for a change.

YET ANOTHER NEW PLAN FOR THE MICROSOFT NETWORK

Does anyone get the feeling that Microsoft has no clue what to do with the Microsoft Network? Initially, the Microsoft Network was supposed to be a "pay as you go" online service where members would pay an extremely low monthly fee and get billed extra whenever they entered anything interesting.

Then Microsoft announced their proprietary development tool for the Microsoft Network, dubbed **Blackbird**. As soon as the Internet wave threatened to make the Microsoft Network extinct before it could even open for business, Microsoft has changed Blackbird from a proprietary development tool to a World Wide Web tool.

Wallace Wang is the author of **CompuServe For Dummies**, **Procomm Plus for Dummies** and **Visual Basic for Dummies** (all published by IDG Books) as well as **Surfing The Microsoft Network**, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672 @compuserve.com or bothekat@aol.com or bo_the_cat@msn.com

Finally, Microsoft claimed that they would limit enrollment to the first 500,000 who signed on to the service. Now with membership enrollment at more than 525,000 members, Microsoft has announced they'll continue signing people up and taking in their money (no surprise there).

Even more amusing is Microsoft's insistence that bundling the Microsoft Network with Windows 95 does not give them an unfair competitive advantage over rival online services like America Online or CompuServe. So if that's true, why doesn't Microsoft take the Microsoft Network out of Windows 95? After all, if it doesn't give them an advantage, then taking it out shouldn't hurt their member recruitment drive either.

BEWARE OF THE AOLGOLD TROJAN HORSE

A new Trojan horse is circulating around America Online and causing havoc among unknowing users. Dubbed **AOLGold**, this Trojan horse appears as a file attached to an e-mail message. If a user foolishly downloads this file and runs the **INSTALL.EXE** file, the **AOLGOLD.ZIP** file expands into the following:

ADRIVE.RPT
ANNOY.COM
DOER.DO
DOOMDAY.EXE
INSTALL.BAT
INSTALL.EXE
SLOWER.ZZ
SUSPEND.DRV
VIDEO.DRV

When you reboot your computer, the **INSTALL.BAT** file runs and renames the **VIDEO.DRV** file to **VIRUS.BAT**. The next time you reboot your computer, **VIRUS.BAT** starts deleting all files on the computer's C:\ drive.

To protect yourself from this Trojan horse, just don't accept strange files from people you don't know. Is that too hard to remember?

FREE ONLINE TIME FOR POLITICAL CANDIDATES?

In another mad effort to attract members, CompuServe planned to offer free access time to political candidates so they could debate issues with one another and answer questions directly from the public. Unfortunately, the Federal Election Committee (FEC) claims the offer would violate a ban on corporate contributions to candidates

for federal office (as if that ever stopped anyone before).

CompuServe claims that offering candidates free access time is no different from television stations offering free time for political debates. So once again the onrush of technology has outdistanced itself from archaic laws dating back to a time when flush toilets were considered the pinnacle of modern science.

PRODIGY VS. NETCOM

Prodigy has accused Netcom of deceptive advertising, complaining that price comparisons Netcom made between its service and Prodigy were wrong. Prodigy said it had reduced its prices in April, a change that was not reflected in Netcom's ads. While Prodigy says they won't take Netcom to court (score one for common sense), Prodigy is demanding that Netcom change their ads to reflect Prodigy's newest prices.

PRICE CLUB TO SELL ONLINE

Price Quest, a subsidiary of Price Enterprises Inc. and Price/Costco Inc., has announced that it will begin offering over 9,000 brand name items for sale through a shopping service called "Price Online," which will be available to all America Online subscribers.

With Price Online, members will be able to browse through 30 departments, which encompass 280 categories of products, including jewelry, cameras, sporting goods, electronics, housewares, and other items at the same discount levels found in their warehouse centers.

Purchases can be made by using major credit cards (Visa, Mastercard, or Discover). Orders are placed directly through America Online, and the goods can be delivered anywhere in the continental United States, usually within ten working days. To really test the extensive selection available through Price Quest and America Online, see if you can buy a CompuServe or Prodigy membership kit. If so, then maybe the Price Online service may not be such a bad deal after all.

COMPUSERVE PLANS OCX TOOL KIT FOR CIM

Over 3 million people use CompuServe, but some people use a general purpose communications program like TeliX or Procomm Plus, others use a special CompuServe navigation program like TapCIS or NavCIS, and still many more

use CompuServe's own WinCIM, DOSCIM, or MacCIM programs.

To make it even easier for people to access CompuServe using their own programs, CompuServe plans to introduce a tool kit, code-named **Falcon**, which will include an OCX (Object Linking and Embedding Custom Control) that will allow users to access CompuServe e-mail and forums from within a Windows program.

Just plug this OCX into your Visual Basic or Delphi program and you can create your own CompuServe communications program, specially designed to access only those portions of CompuServe that you (or your customers) use most often.

"Our corporate partners have been crying for this for a long time because they often use a specific piece of CompuServe for mainstream communication," said Ji Snell, product manager for CompuServe's Information Services Division, in Columbus, Ohio.

Snell added that CompuServe is also looking to provide Falcon to users as a means of adding connectivity to CompuServe on an ad hoc basis. "Falcon will provide the means to offload a lot of the management and customer support we have to provide to our third-party software developers," he said.

Since hardcore programmers tend to prefer CompuServe over their more mainstream rivals like America Online and Prodigy, the introduction of a CompuServe OCX could further increase CompuServe's popularity as a business tool. Then again, CompuServe might just be opening their doors to streams of hackers, armed with the CompuServe OCX, their favorite compiler, and lots of imagination. At the very least, it will give Visual Basic and Delphi programmers something new to play with for their own programs.

AMERICA ONLINE IN GERMANY?

Bertelsmann AG and America Online have joined forces with **Deutsche Telekom** to help form the European version of America Online. The Bertelsmann/AOL joint venture will focus on the home/consumer market in Europe and plans to compete with rival **Europe Online Alliance**.

Now that America Online has taken over the American online market and angered scores of unhappy customers

with their attitude, it's time to take this same attitude to the refined world of Europe to see what might happen. Can America Online thrive in Europe? Or will America Online be perceived as the "Ugly America Online?" Stay tuned and see how Europe reacts to another intrusion of American corporations into their neighborhood.

VISA VS. MICROSOFT

The Visa International credit card company is denying reports of a possible breakdown in its pact with Microsoft to develop a standard method for conducting secure credit card transactions over the Internet.

USA Today reported Visa's alliance with Microsoft is "cracking behind the scenes" because it is working toward convergence with another alliance backing a standard other than the one under development by Microsoft.

Apparently VISA is also working with the competing alliance, backed by Mastercard International, IBM and Netscape Communications. Since nobody trusts Microsoft and doesn't want them to rule the Internet like they do the operating system market, maybe VISA will switch alliances and leave Microsoft's plan as isolated from public acceptance as OS/2.

AMERICA ONLINE STEALING CONTENT?

America Online is the fastest growing online service, but you may wonder where they get their content. Here's an

interesting story that may reveal America Online's secrets, as told by Chris Thomas, Publisher/Editor of **OutNOW!** magazine:

*"Some months ago, AOL's Gay & Lesbian Community Forum (**Keyword: GLCF**) started to expand its news coverage via separate 'moderated' folders (i.e., general public can't post to them). These can be found under 'In The News' at GLCF.*

"At about the same time, a representative of GLCF wrote to us to ask permission to republish material from our Web site — <http://www.zoom.com/outnow/>. I wrote back and explained that we don't own the full rights to most of our material — rather, we just take first rights — so I didn't have the capability to grant reprint permission even if I wished.

"Then, about two weeks later, I was browsing 'In The News' and was surprised to find some of our national briefs appearing verbatim, plus some of our signed commentary pieces verbatim, in this section of AOL.

"I wrote the typical threatening letter, and got the typical apology about a day later. Since then, I've checked GLCF from time to time and haven't found any more of our material.

"What still concerns me, however, is that almost all of the material in In The News is from other sources, including daily newspapers, wire services, and the like. My ongoing concern is whether or not reprint permission has been secured

for these items. (The 'fair use' argument wouldn't fly with me, since AOL is making \$\$\$ on connect charges while folks read this stuff.)

"And as I explained to the AOL folk, I cracked down not out of any hatred toward AOL or the GLCF. One of the reasons my writers stay with me is that I watch for violations of their copyrights. And as the provider of an advertiser-supported (ok, not exactly supported at this point) Web service, it just didn't seem right for any other service to lift my material and then charge someone to read it."

So is America Online violating copyrights or was this an isolated incident? Why not write a letter to America Online directly and find out for yourself? If we can get several thousand people asking this same question, maybe we'll find out the truth so everyone can know. ♦

Buy Direct from Distributor Order Line 1-800-965-6426

DIGIBOARD Intelligent Multiport

4 port Multi PC4 / PC4E	\$268 / \$418
8 port Multi PC8 / PC8E	\$388 / \$498
16 port Multi PC16 / PC16E	\$818 / \$828
32 port Multi PC32EM	\$1498

COMTROL Rocketport

4 port Intelligent 1 CPU	\$209
8 port Intelligent 1 CPU / w/Octopus	\$269 / \$299
16 port Intelligent 2 CPU / w/RS232	\$428 / \$658

INTELLIGENT / NON-INTELLIGENT BOARDS

GTEK / BOCA / EQUINOX SCALL

ALL MODEM BRANDS AVAILABLE:

AT&T, Motorola, Microcom, Multitech, Boca, Intel, US Robotics, Practical Peripherals, Zoom, Zyxel, ISDN, Networks, Dialogic, etc..

CALL FOR BEST PRICES ON CURRENT PRODUCTS

☆ Best **COMPUTER SYSTEM**

without Monitor

◆ 486DX2-66 / 486DX4-100	\$659 / \$699
◆ Pentium 90 / Pentium 100	\$1075 / \$1089

We Sell Full Line of Computer Parts SIMM, CPU, HD

FD, Motherboard, IDE, I/O, SVGA Card, Keyboard, Mouse, CD/Sound/Speakers

WildCat Software 10-Lines / 48 Lines / Platinum	\$158/\$308/\$498
The Major BBS 2-users / 8-users / 6pk add-on	\$148/\$398/\$178

Charge to ☐VISA ☐MC ☐DISC ☐AMEX **Call for Qty Discount** Tel: 714-693-1870
YOKOHAMA Telecom Corp. 1251- 401 Manassero St. Anaheim, CA 92807 Fax: 714-693-1871

Price, availability and specifications subject to change without notice. Restock charge / No refund after 20 days.

WE WILL BEAT ANY PRICE ADVERTISED IN THIS MAGAZINE ON THESE PRODUCTS:

WORLDGROUP 8-USER BASELINE WORLDGROUP SIX PACKS WORLDGROUP INTERNET SERVER

Call us with the best price you've seen advertised in this issue - we'll ask you for the page number & beat it.

MORE CONVENIENT DOWNLOADING!

Allow your users to download files by sending themselves an email message with a file attachment. This file transfer protocol will prompt the user for an email address and then send one or more files to that email address. If you have an internet connection, your users can now easily get files - even if they are having a hard time FTPing or downloading through telnet. File is transferred through your internet connection, saving your valuable channels.

EMAIL ATTACHMENT PROTOCOL: \$79

Now you can read ALL Electronic Mail on your Worldgroup System. Written for corporations who want to protect themselves from possible liabilities. Protect Your System. Protect Your Users. Protect Yourself.
EMAIL SPY: \$79



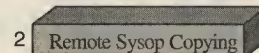
Why Everyone Needs The Ultimate Globals Package:

Imagine a globals package with everything, literally. This globals package contains over 100 features - no other package comes close. This package is so powerful, sysops nationwide are switching to it in droves! The package also contains over 200 text variables for maximum flexibility.

Ultra Globals Contains:

User Defined 'Who's On List', Invisibility Command, Clear Screen, Load Keyring, Help Request, Ansi Toggle Echo Toggle, Simulate Logon Command, Simulate Logoff Command, User Defined Information, Announce Command, Userlist at Logon Toggle, Busy Toggle, Set Nickname, Auxiliary Userlist, Set Tagline, Improved Userlist Suspend User Command, Boot User Command, Logoff User Command, Set Screen Length, Set Screen Width, Instant Logoff, Remaining Credits, Toggle Logon/off Display, Set Logon Message Set Logoff Message, Toggle User's Busy, Toggle User's Invisibility, Switch User's Class, Give User Key, Show User's Keys, Extend User's Time Limit For Day, Extend User's Time Limit For Call, Relog Self, Relog User, Display DOS Directory, Toggle Reprompting, Alternate /GO Command, Toggle Alternate Go mode, Type a File,

Copy Time in Seconds



0 10 20 30 40 50 60 70

Our copy command is not only globally accessible but also several times faster than remote sysop copy.

Change # of Calls Received, Unbusy Notifier, FSE Autobusy, 20 Short (65 character) Macros, 5 Long (135 character) Macros, Repeat Last Command, Edit Last Command, FSE Toggle, Delete a User's Registry, Alternate /p ON, OFF and OK Commands, Information on Yourself, Write Comment into Audit Trail, Change Password, Post Credits, Internet Address Cross Reference, System Stats, Page Unbusy List, UltraGrams Delete File, Rename File & Much More...

Entertainment

Lost Caverns - Now Including Premade Game! Game permits you and your users to build the game as they play! **\$399**

Bartender - Users make drinks & keep an inventory of ingredients in this unique game of cocktail knowledge. **\$99**

Forbidden Lands I, II or III **\$79**
Buccaneers **\$79**
Cybertech **\$79**
World Wide War **\$139**
Worldgroup Hangman **\$24.95**
Choke **\$39**
Star Market **\$49**
Ringmasters **\$149**
Food Fight **\$165**
Cybertank **\$395**
Teleconference Trivia **\$149**
The Major Jail **\$25**
Flowershop **\$99**
Brawl (Gunfighter) **\$149**
The Doctor **\$99**
Who's Who **\$165**

Applications

Accounting Automation **\$39**
Anonymous Teleconference **\$49**
Autopost **\$15**
Chat-Now **\$125**
Console Lock **\$49**
Credit Exchange **\$39**
Dual Password Security **\$39**
Email Attachment Protocol **\$79**
Email Spy **\$79**
Executive Informer **\$79**
Fileviewer **\$79**
Global Monitor **\$79**
Global Teleconference **\$49**
Graffiti Wall **\$15**
Modem-to-Modem **\$29**
MultiChat **\$125**
Not Keys **\$49**
Information Query **\$49**
Super Sysop Pager **\$49**
Ticker Tape **\$79**
Ultra Colors **\$25**
Ultra Globals **\$79**
Major Pro SDK **\$249**

Hardware

Autopatch - Its finally here! **\$39**
Allow your users to switch from talking in the teleconference to talking voice in a conference call. **\$49**
Sixteen channels each allow an unlimited number of users to talk voice with each other. Software allows you to set public and private channels. Autopatch will also detect non-responding modems and automatically busy them out. Modems will be unbusy once they start responding again. Each box services eight phone lines. Boxes daisy chain for larger systems. **\$15**
Cables Included. **\$555**
Boca Sixteen Port Serial Board - Unbelievable price for reliable, high speed serial ports. We can even make you cables of any length. **\$219**
Boca Six Port Serial Board - Six high speed ports, similar to sixteen port board. **\$109**
Telguard - Telephone Line Surge Suppressors. Single and Multiline units available. **\$15**
Turnkey Systems - Hardware & software bundled and delivered already configured. **\$CALL**

Services

We do custom programming, consulting, turnkey integration and training either at our Morganville, NJ facility or at your site.

Since we're located in Central New Jersey, we can provide on-site service to customers in New Jersey, New York, Pennsylvania, Maryland, Delaware and Connecticut.

Whatever your needs may be, we can accommodate you - call us!

Hours: M-F 10-6 Eastern Time

Voice: 908-591-1234

Fax: 908-591-8652

BBS: 908-591-1171

Cheersoft
457 Highway 79
Morganville, NJ 07751



ZEN-ZEE ONLY \$60

CALL FOR A FREE CATALOG

Prices subject to change without notice.

ORDERS ONLY

800-254-3525

TRY FOR FREE

You can run any of our software products for a limited time with no obligation!





MANNING THE WIRES

by Ric Manning

INVESTMENT FIRMS CASH IN ON THE WEB

Look through the pages of personal finance magazines and you'll see some things in the ads that weren't there a year ago. Mutual fund companies, financial consultants and brokerage firms are starting to list their World Wide Web addresses along with their toll-free telephone numbers.

The Internet and other online services are teeming with sites sponsored by financial service companies that offer stock quotes, financial news, company information and research reports.

In fact, almost all of the inside information that professional traders and brokers depend on — real-time quotes, forecasts and technical analyses — are available to individual investors, often at a modest price or even free.

"There is virtually nothing that a professional broker has on his desk that an individual can't have on their PC," said Paul Farrell, author of *The Investor's Guide to the Net*, a new book from John Wiley & Sons that is scheduled to be released this February.

Farrell says the Internet, along with smaller private computer networks, is starting to spread what he calls the Wall Street Cyberspace Revolution from the silk stocking office buildings down to individuals who want to manage their retirement portfolios on their PCs.

"The playing field is leveling," Farrell said. "The individual investor is now coming armed with all sorts of resources to better compete with the institutional investor."

And that's making the big investment first "just a little bit nervous," said Richard Green, the former president and founder of MMS International, an investment analysis service that's now owned by Standard & Poor's.

By bringing together a huge market of individual investors, Green says the computer networks are changing the rules of the investment game the way discount brokerage services put the squeeze on the big-name trading houses.

Until the 1980s, investors who wanted a current price quote once had to call their broker or hang around the broker's office. Then commercial online services made delayed quotes available to computer users for a small price. Now more than a dozen sites on the Internet will give you a delayed quote for free or sell access to real-time quotes for less than \$50 a month.

Financial service companies are joining the rush to the Internet in hopes of connecting with affluent, computer-savvy investors. A survey by Georgia Tech estimated that the average Web user has an annual income of about \$69,000. Fidelity Investments, the Boston-based mutual fund company, says its customers are twice as likely as the average American to have a computer at home. And the success of home finance programs such as Quicken is a good indication that they're using personal computers to manage their money.

Investment firms have been a part of the online world for several years. Banks and brokerage houses can be found on CompuServe, America Online and Prodigy. But an increasing number are setting up shop on the Web where they have a broader reach and more control over their product. Now the Web is quickly becoming a one-stop open-

all-night source of information and service for investors who want to track the market, investigate companies and do their own trading.

REALTIME NEWS

For example, Green's Briefing — <http://www.briefing.com> — delivers a running analysis of investment trends and Wall Street action like the reports that Reuters, Quotron, Bloomberg and others deliver to

terminals in trading offices around the world.

"We want to bring the same sort of information to individuals on the Web," Green said. "Hopefully, we can help level the playing field between investors and Wall Street, and use the Internet to reduce the Street's information and time advantages."

Ric Manning writes about business technology, computers and consumer electronics for *The Courier-Journal* in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web <http://iglou.com/gizweb>.

Ric was the founding editor of *Plumb* and *Bulletin Board Systems*, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including *PC/Computing*, *Mobile Office*, *PC Week* and *Home Office Computing*. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at mailto:ricman@iglou.com.

Briefing Concise Market Analysis
Briefing provides constantly updated financial market analysis from experienced professionals.

Stock Ticker	Bond Ticker	Dollar Ticker	Economic Data	Political Brief
Market Brief	Market Forecast	Market Calendar	Econ Forecast	Political Forecast

Headlines Below Correspond to Buttons Above. Click Button or Headline to Retrieve Story. Click on Reload to Ensure Latest Headline. ... [About Charter Media](#) and [Schedule of Updates](#)

11:30 ET Stock Ticker	Dow 5098 -8 Nasdaq -7: Watch Techs!
11:30 ET Bond Ticker	30-yr Up 4/32 at 6.001%
12:30 ET Dollar Ticker	Dollar at ¥102.75
08:30 ET 12/28 Economic Data	No data today
12/28 Political Brief	Taxpayers Go on Strike

Green's Briefing offers continuous investment news

Briefing started as a free service but it may not stay that way. "We are a profit-seeking enterprise," said Green. Current plans call for Briefing to sell its reports for about \$10 a month — far less than the \$100 to \$400 monthly fees that trading offices pay for similar reports.

There are plenty of other sources on the Web for company news and information. Farrell said he uses Time Warner's Pathfinder — <http://www.pathfinder.com> — to look up stories from *Fortune* and *Money* magazines. Web users can also get a jump on the *Wall Street Journal* by reading the paper's market wrap-up online at <http://update.wsj.com/update/edit/frontpg.html> the night before the printed version appears.

ONLINE RESEARCH

Computer-using investors who were accustomed to getting free access to company filings from the Securities and Exchange Commission got a scare last fall when a trial project run by the Internet Multicasting Service reached its expiration date.

But the SEC stepped in and rescued the *Edgar* project, despite criticism from companies that sell the data. Investors who don't mind a 24-hour delay before reading quarterly reports and other filings can log into the SEC's Web site at <http://www.sec.gov> and download copies of the reports. Private companies such as Lexis/Nexis and Disclosure still have the right to sell the information immediately as it arrives at the SEC.

Another source of information about public companies from the companies themselves is *InvestorWEB* — <http://www.investorweb.com> — an Indiana-based site that posts reports and news releases for corporate clients. In many cases, visitors can use e-mail to request mailings or other information from the companies.

TECHNICAL ANALYSIS

The ability to do computer modeling, trend analysis and projections is still an area where the professionals enjoy an advantage. But even some of these high-value reports are starting to make their way to the Web.



TIPnet sells advice and historical data

Quote.com — <http://www.quote.com> — sells online subscriptions to *Zacks'* earnings estimates for about \$15 a month and *Trendvest's* market projections for about \$25.

Telescan Financial Services, the company that provides stock charts and other statistical information to trading firms is also putting some of its products on the Web.

TIPnet (<http://www.tipnet.com/>) dips into Telescan's database for details covering 77,000 stocks, mutual funds, bonds, options and other investment items. For about \$10 a month, subscribers can get current and historical quotes, news reports, quarterly earnings, company facts and Telescan's technical reports. Stock graphs, insider trading reports and a searchable news database costs an additional \$10.

ONLINE TRADING

When it's time to place your order, several brokerage firms are ready to do business on the Web. The first company to offer discount trading on the Web was a division of Chicago's *Howe Barnes Investments Inc.* The firm works with the *PAWWS Financial Network* — <http://pawws.com> — whose Web site brings together several investment services including a trading service.

Richard S. Griffin, senior vice president at Howe Barnes, said company got involved in online trading to attract a wider customer base.

"We sort of looked at it as a pilot project," he said. Clients who use their computer to invest are typically younger than the customers at full service brokerage houses or even discount firms. They are also customers who want an integrated service and the con-

venience of 24-hour access and online confirmation.

Griffin said the service gets visited by several hundred people every day and — he wouldn't say how many — have put up the minimum \$2,000 to open an account and begin investing.

If you're not sure you have the stomach or the cash for playing the stock market, drop by the home page run by Fidelity Investments at <http://www.fid-inv.com>

and take the online survey. It analyzes your tolerance for investment risk and suggests ways to allocate your money among Fidelity's mutual funds.

PORTFOLIO MANAGEMENT

Once you've created an investment portfolio, you'll need to keep track of your money. Virgil Corporation of San Francisco offers a service called *StockTracker* that will do more than update prices at the end of the day.

Activate StockTracker and it connects to the StockCenter quotes server at <http://www.stockcenter.com> and retrieves the latest prices for up to 200 securities. The Windows program will operate in the background and call the server every hour or half hour to get 15 minute delayed quotes for stocks in up to 12 portfolios.

The program also includes high and low price alerts, which inform you when a stock reaches a certain price level, and a option that lets you be notified by pager. The service costs about \$25 for three months, then about \$10 a month.

ONLINE ADVISORS

There's also no shortage of investment advice on the Net. If you want to pursue some ideas that are a little out of the ordinary, check into the *misc.invest.stocks* newsgroup on USENET. The discussion board has become online equivalent of late-night infomercials with all sorts of pitches for money-making schemes.

One of my favorites is the poster who warns of a big financial crash because of "an 8-planet alignment in or on the cusp of Capricorn around the time of the winter solstice."

But hey, at least this advice is free. ♦



MICROSOFT NETWORK NEWS

by Durant
Imboden

MUCH ADO ABOUT AVATARS

As I write this column, I'm recovering from my first encounter with the beta of MSN's "V-Chat." This new chat platform, developed by Microsoft's Virtual Worlds Group, is billed as a "multimedia, multi-user social environment that lets people communicate online from within a 2D or 3D graphical environment using graphical representations of themselves known as avatars." It should be released just as this issue of *Boardwatch* goes to press.

Using the templates in the V-Chat SDK, Microsoft Network content providers can create new three-dimensional spaces with generic avatars and sound effects. Or they can employ third-party VRML tools like SoftImage and 3Dstudio to build custom chat areas, chat-based games, and so on. Users are free to concoct their own avatars with MSN's V-Chat Online Avatar Database. In the future, V-Chat will replace typing with talking — although that won't happen until cable modems, ISDN, ASDL, and other technologies bring greater bandwidth into the average home.

Personally, I find the whole concept of virtual reality chat a little disconcerting. After ten minutes in a fishbowl, complete with bubbling and gurgling sounds, I'm ready for a double dose of Dramamine. And I hate to think of the censorship issues Microsoft will face when the "Anyone for sex?" crowd in Chat World discovers what can be done in three dimensions.

Still, if this is the future, I'm ready for it. I'll graft a Hemingway head onto a Schwarzenegger body, and presto! My avatar will be there at the virtual door, grinning and shaking hands with chat guests as a .WAV file of my long-retired IBM Selectric typewriter clatters away in the background.

THE SOCIOLOGY OF "MSN SUCKS!"

Hang around on MSN for a day or two, and you'll see repeated displays of hostility against Microsoft. Members who haven't learned the difference between message boards and chat rooms don't just complain; they SCREAM in capital letters. Users from other services gnash their virtual teeth because MSN has an unfamiliar interface. And a few users — most notably former Windows 95 beta testers — can't understand why they have to pay for access to The Microsoft Network. (This is known as the "Isn't Bill Gates Rich Enough?" Syndrome.)

The most blatant hostility comes from AOL members, who sign up for trial memberships and use

their 10 free hours to blast MSN at every opportunity. An Oliver Stone fan might wonder if Steve Case weren't orchestrating an "MSN sucks!" campaign from his AOL war room in Vienna, Virginia.

CompuServe fans, on the other hand, seem more genteel. Prodigy users don't seem to say much, except "I'm lost." GENie members are seldom seen unless they're scouting for a new home, and Delphi users are as invisible as a Team OS/2 member at a Microsoft picnic.

This imaginary chat transcript illustrates the sociological aspects of the "MSN sucks!" phenomenon:

Host_Durant_Imboden_MSN: Hi. Welcome to the Writing forum's scheduled Sunday chat.

Spit_in_Bill's_face: MSN SUCKS...AOL RULES

Child_Prodigy: Can anyone tell me where I am?

Host_Durant_Imboden_MSN: You're in the Writing forum.

76116,2776_571-70-6428: Hello.

Host_Durant_Imboden_MSN: 76116: You must be a CompuServe user, right?

76116,2776_571-70-6428: Yes. I didn't want to cause confusion here by using my CIS ID by itself, so I combined it with my Social Security number. Pretty clever, if I say so myself.

Spit_in_Bill's_face: MSN SUCKS COMPUSERVE SUCKS BIG TIME TO

Child_Prodigy: What's CompuServe?

GENie-us: Excuse me, but I have a complaint...

Host_Durant_Imboden_MSN: Yes, GENie-us?

GENie-us: Do people have to use Rich Text Format in their BBS messages? All that color gives me a headache. And when will a DOS version of MSN be available?

Host_Durant_Imboden_MSN: No DOS version ever, I'm afraid. MSN is a 32-bit application that needs an OS like Windows 95.

Child_Prodigy: What's an application?

Spit_in_Bill's_face: IF BILL GATES IS SO SMART THEN WHY IS THIS HARD TO USE HE SHOULD COPY AOL

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network.

His credentials include published novels, articles, and short stories; fiction editing and staff writing for *Playboy*; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts.

When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. Mailto:

Durant_Imboden_MSN on The Microsoft Network or writing @msn.com on the Internet. The author is not an employee or spokesman for Microsoft.

Host_Durant_Imboden_MSN: Spit, could you turn off the Caps Lock key? Your shouting is hard to read.

Spit_in_Bill's_face: MSN FARTS BIG TIME TO.

Child_Prodigy: Wow, you can say that word here? Don't tell my mom!

Felip_de_Barcelona Bon dia. Parlen vostSs catal...?

Host_Durant_Imboden_MSN: Felip: I'm afraid not. Wait a few months, and we'll probably have a Catalan content tree.

Felip_de_Barcelona: Bill Gates ,s massa ric.

76116,2776_571-70-6428: Durant: I'm disappointed that MSN doesn't have a forum for Commodore users. I suppose that's because Microsoft doesn't want to encourage rival operating systems?

Host_Durant_Imboden_MSN: Well, we do have an OS/2 forum and a Macintosh forum.

Child_Prodigy: What's OS/2?

Spit_in_Bill's_face: CANCEL MY ACCOUNT I CAN'T TAKE THIS SUCKY PLACE ANY MORE AND ANY WAY WHY CAN'T I GET ANY SEX HERE

Host_Durant_Imboden_MSN: Spit: Try the Sexuality Forum. Use the "go" word "sexuality."

Spit_in_Bill's_face: I CANT SPELL SEXALITY AND ANYWAY ALL FORMS HERE SUCK

Child_Prodigy: What's sexuality?

(*Host_Durant_Imboden_MSN* asks himself if guns will be available as host tools in Virtual Reality chat)

POWER AND PERKS

There are benefits to being a sysop on a major online service. No, I'm not referring to the monthly compensation — I'm talking about respect and free goodies. Take me. As manager of the Writing forum in MSN's Arts & Entertainment area, I've enjoyed a number of special privileges:

Press coverage. I'm still waiting for an invitation to the "Tonight" show.

(Bill, could you talk to Jay?) But the *Twin Cities Reader*, a weekly newspaper distributed throughout the Minneapolis-St. Paul metropolitan area, profiled me in its "True Stories" series. Of course, there was a downside—the reporter forgot to mention that the paper was repositioning itself as an Enquirer for the face-metal set. Let me put it this way: How would you like to be described as a "proto geek," an "Internet savant," or "the computer hound's equivalent of eccentric pianist Glenn Gould"?

Free books. Soon after I signed my contract with MSN, I informed major book publishers that I'd be happy to review books about writing. Funny thing is, Writer's Digest Books (which publishes nothing but writing manuals) is the only company that has sent



me books on authorship. The other publishers have turned my front porch into a dumping ground for cartoon books, anti-smoking guides, business books, a William F. Buckley anthology, baby books, and even a model of a bat (the kind found in caves, not dugouts). Still, the news isn't all bad — my public library is grateful for the free books, and the bat model will make a nice gift for a child's birthday party.

Free software. I've probably saved at least \$1,500 on writing-related software over the last few months. On the other hand, how many story-development programs and writing courses does any author really need? And how many screenplay formatters? Worse yet, do I really want to learn how to use all these packages so I can write intelligent reviews? I guess I don't have any choice — to rephrase a cliché, "With freebies comes responsibility."

BLACKBIRD: HOME TO ROOST

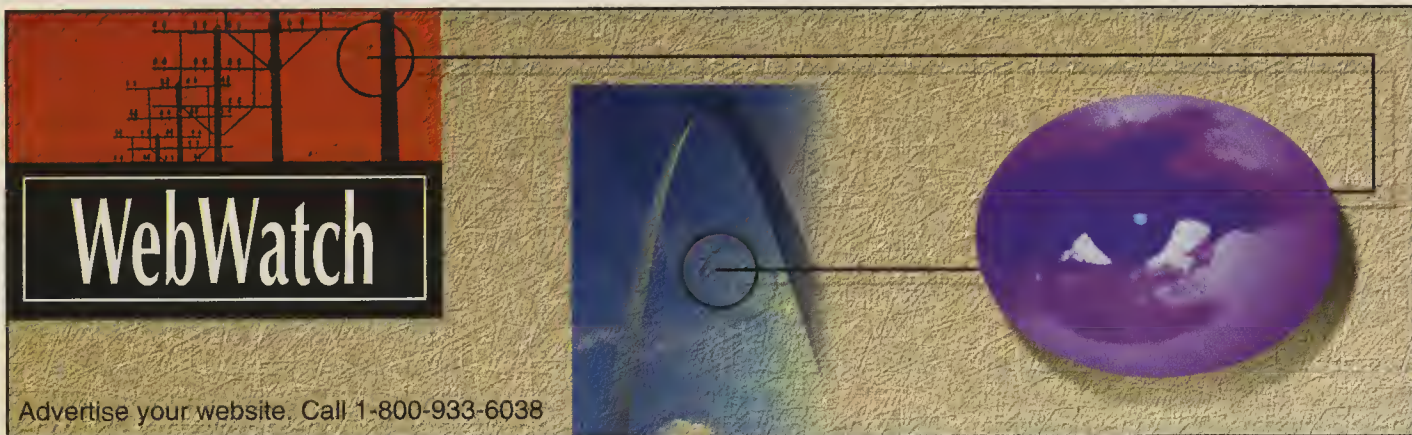
For the last nine months, Microsoft has been pitching the virtues of its Blackbird online publishing platform — a product that was originally designed for MSN and has since been promised for the Internet.

Blackbird's first beta titles were posted on MSN two months ago. The MSN version of Blackbird should be in final release by the time you read this, and Web publishing tools — including a viewer for Internet Explorer and other browsers — are expected to ship in the first quarter of this year.

Just what is Blackbird? At its simplest level, Blackbird is a program that lets MSN or Web content providers design online titles that look like magazine pages without writing a single line of code. The Blackbird Designer package could be described as a simpler, easier-to-use version of Microsoft Publisher. Frames for headlines, subheads, captions, etc. are created with the drag of a mouse. Photos and artwork can be placed anywhere on the screen. Need to resize a picture or add a border? A few mouse clicks, and you're done. Control buttons for "print," "next page," and other functions are just as easy to create.

More advanced users can use Blackbird to create dynamic titles (such as online newsletters) where the basic format is static but the text and photos vary from day to day. This approach makes regularly updated pages load faster, since much of the online publication's graphical content can be stored on the user's hard disk instead of being transmitted over the phone lines.

Technologically savvy content providers will soon have even more options — such as incorporating sound and video, or linking Blackbird titles to remote servers and databases. Microsoft has said that Blackbird will be compatible with Sun's Java language, so Web developers won't be forced to choose between platforms when developing online. Instead, they'll be able to use whichever tool works best for a given application. This scenario assumes, of course, that Microsoft succeeds in establishing Blackbird as a Web publishing platform and not just as a tool for creating publications and multimedia titles on MSN. ♦



WebWatch

Advertise your website. Call 1-800-933-6038



APDI The Nation's Premier Online Service Bureau

<http://www.apdi.net>

Application Programming and Development: APDI is the nation's premier online service bureau, with over 500 simultaneous connect lines. Provides customized systems for corporate and professional organizations nationwide.

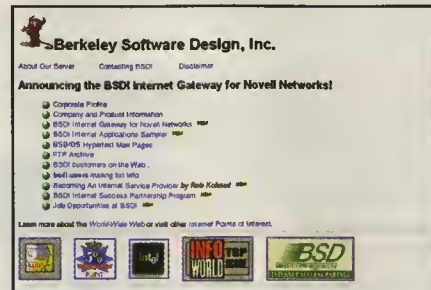


Welcome to Planet Systems Inc.

The History of PSI
Skylink
Planet Connect
Planet Connect TV
Technical Support
Radio Shows
Ordering Information

<http://www.planetc.com>

Planet Systems, Inc: Satellite Distribution of Information Products for Online Services, Skylink, Planet Connect, and Planet Connect TV. Includes UPI News and Pictures, Stock Market and Financial Data, Accu-Weather.



Berkeley Software Design, Inc.

Announcing the BSDI Internet Gateway for Novell Networks!

- Corporate Profile
- Company and Product Information
- BSDI Internet Gateway for Novell Networks
- BSDI Internet Application Sampler
- BSDIOS Independent User Pages
- FTP Archive
- BSDI Customers on the Web
- BSDI News and Press
- Becoming An Internet Service Provider by Bob Kohn
- BSDI Internet Success Partnership Program
- Job Opportunities at BSDI

<http://www.bsd.com>

Berkeley Software Design, Inc: Berkeley Software Design, Inc. Designs, develops, markets, and supports the state-of-art BSD/OS UNIX operating system for Intel chip architecture computers, BSD/OS Internet Server, BSD Internet Gateway for Novell Networks.



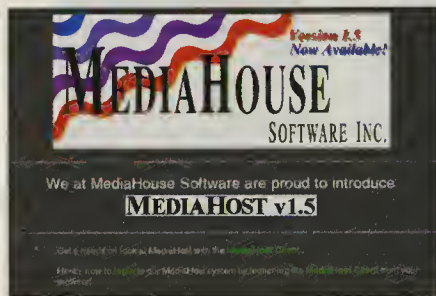
MurkWorks Incorporated

Product Information

For more information, send your request to info@MurkWorks.com

<http://www.murkworks.com>

MurkWorks, Inc Developers of BBSNet, IPDoor, and WorldSock. Powerful Internet access add-ons for most popular BBSs. Provide ANSI & RIP 'net clients, SLIP & PPP and painless Winsock access.

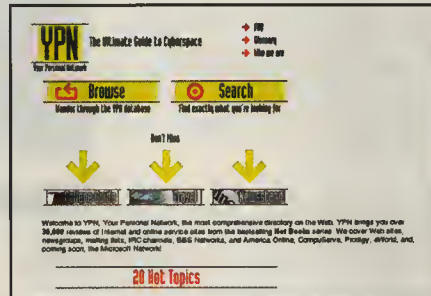


MEDIAHOUSE SOFTWARE INC.

We at MediaHouse Software are proud to introduce **MEDIAHOST v1.5**

<http://www.mediahost.com>

Media House: Developers of Media Host BBS software. Provides the power and design tools to create state of the art online systems. Graphical client/server works with dialup or TCP/IP - database extensions.



YPN The Ultimate Guide To Cyberspace

YPN Personal Network

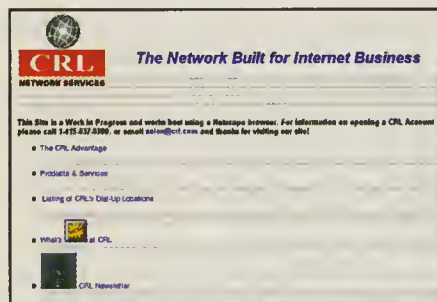
Browse Search

Find exactly what you're looking for

20 Hot Topics

<http://www.ypn.com>

Michael Wolf and Company: Your Personal Network brings you over 30,000 reviews of online service and Internet sites from the best-selling Net Books and magazines NetGuide, NetChat, NetMoney, NetMusic, NetGames, NetSports, NetTech, and NetTrek.



CRL The Network Built for Internet Business

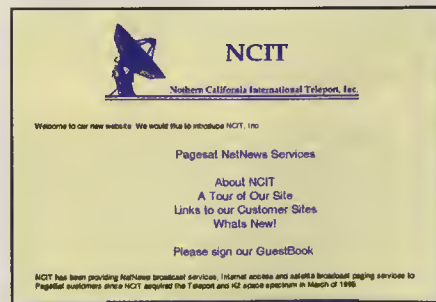
NETWORK SERVICES

This Site is a Work in Progress and works best using a Netscape browser. For information on opening a CRL Account please call 1-800-837-8999 or email info@crl.com and thanks for visiting our site!

- The CRL Advantage
- Products & Services
- Listing of CRL's Dial-Up Locations
- What's New at CRL
- CRL Newsletter

<http://www.crl.com>

CRL Network Services: Dial-Up Internet Access, Dedicated Internet Connections, Custom Services, Customer Support provides customers with the fastest and most reliable network access available.



NCIT Northern California International Teleport, Inc.

Welcome to our new website. We would like to introduce NCIT, Inc.

Pagesat NetNews Services

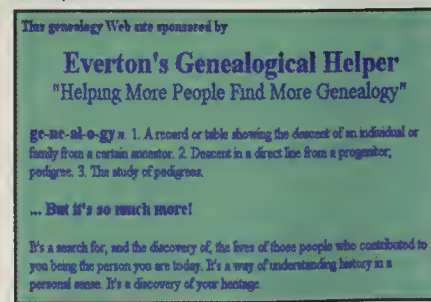
About NCIT
A Tour of Our Site
Links to our Customer Sites
What's New!

Please sign our GuestBook

NCIT has been providing NetNews broadcast services, Internet access and satellite broadcast paging services to PageSat customers since NCIT acquired the Telesat and IC space services in March of 1995.

<http://www.ncit.net>

Northern California International Teleport: Providers of Internet Access, Fidonet, E-Mail, high speed (115KBPS) satellite delivered NetNews and broadcast paging services to PageSat customers.



The genealogy Web site sponsored by

Everton's Genealogical Helper
"Helping More People Find More Genealogy"

ge-ne-al-o-gy 1. A record or table showing the descent of an individual or family from a certain ancestor. 2. Descent in a direct line from a progenitor; pedigree. 3. The study of pedigree.

... But it's so much more!

It's a search for, and the discovery of, the lives of those people who contributed to you being the person you are today. It's a way of understanding history in a personal sense. It's a discovery of your heritage.

<http://www.everton.com>

"Everton's Genealogical Helper," the largest genealogical magazine in the world. Provides links to the best genealogical resources on the WWW, links to an on-line genealogical magazine and On-Line Search with over 70 million ancestor names.



TEAMate MMB Bulletin Board & Internet Server Software

MMB Development Corporation (800) 632-0022

With TEAMate software, your UNIX server runs a fully featured online information system with features similar to America Online or CompuServe. TEAMate covers everything you need to get started: you can now using our modified plus address and a TEAMate ID to connect to the Internet, then or later, your standard board access via a modem. TEAMate software is also the best choice for adding a new board, group, user base, leaving, etc. TEAMate is available in its popular UNIX version or platform. When using TEAMate in a Web browser or the tag editor, the TEAMate automatically generates HTML, so you don't have to.

NOTE

If you continue to get validation failure, visit your browser and verify:

Register Instructions, Free Access, No Charge

Please register for full access to the presentation server. First click on the register button, then enter your personal user name and password. If you're using a proxy, click on register and enter your user name and password. Thank you.

If you register and login you can get a copy of our TEAMate ID and when you log on you'll receive your own information. You can also access information from the WEB browser you are now using. The TEAMate ID is a file that contains information that you can use to connect to TEAMate software. Because it's a text-based format, you can use a text editor to edit it. It's more efficient than a Web browser. You can also use our own Web browser or our old one. Our client will run directly over the browser using a TCP/IP connection or it will run through a proxy using a TCP/IP proxy.

<http://mmb.com>

MMB Development: Developer of MMB TEAMate UNIX WEB BBS. TEAMate software now includes an integral WWW browser allowing you to mix HTML and other data within your TEAMate Bulletin Board.

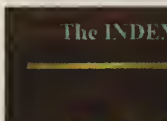


Welcome to BSI Technologies, Inc....

BSI Technologies, Inc. is a leading provider of turnkey BBS systems and services. We have been in business since 1985 and have a proven track record of providing quality service and support to our customers. We are currently looking for new customers and are offering a special discount on our services. Contact us today for more information.

<http://www.bsitech.com>

BSI Technologies, Inc: Your Worldgroup solution providers. If you're thinking about starting your own online service, or need help with your existing online service, we can participate in the design and implementation of your vision. We also offer complete turnkey systems.



The INDEX System FBBS (tm)

Services and Sales

INDEX Inside

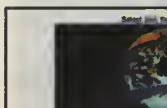
Counseling Services, Software, Hardware and Turnkey Systems

Atlanta's Weather

Recommended Resources

<http://www.index.com>

The Index System: We are a full-service company specializing in telecommunications hardware and software, BBSs and related applications. For everything from sales and on-site installation to internet connectivity for BBSs and consulting, we're the BBS experts.



Mustang Software

Products, feedback, upgrades, newsletter

"CONNECTING THE WORLD"

Home of QmodemPro for Windows 95, The Premier Communications Solution for Windows 95

Welcome, you are visitor number 12345

Mustang Software, Inc. offers a range of products for your communications needs, including WinModem, the world's most popular BBS software, QmodemPro for Windows and the Award-winning QmodemPro for Windows. All products are available through your usual computer software distributor.

© 1995 Mustang Software, Inc.
6200 Lake Mary Road, Lake Mary, FL 32746
800-875-2000 Office

<http://www.mustang.com>

Mustang Software, Inc: Producer of QmodemPro, the first communication package that delivers all the features and performance to get the most from the new Windows platform. It offers communication and Internet capabilities beyond the standard terminal software.



Internet Applications Launchpad

GET INTERACTIVE with Durand's all new Internet applications platform MINDWIRE. MindWire and MindWire NT enable you to create a sophisticated interactive Internet service. Using MindWire, you can easily develop and deploy sophisticated Internet applications which can be accessed by your users through modem, network or Internet.

Without any programming at all, you can put together an incredible online system by simply clicking the mouse and web to offer from a list of fun, fast applications. If you are a developer, you will love the sophisticated limited HTML which allows you to develop applications for MindWire using virtually ANY Windows development tool you wish. The development guide is available FREE.

Get MINDWIRE NOW!

<http://www.durand.com>

Durand Communications: GET INTERACTIVE with Durand's all new client/server applications platform MINDWIRE. MindWire and MindWire NT enable you to create a customized interactive Internet service.



CONTROL

Check out the best of the best! Best high-performance multipoint and point-to-point systems. Remote Access applications a breeze!



RocketPort

Check out our ever popular RocketPort! New, intelligent, non-invasive, synchronous, and asynchronous multipoint server controllers!

Hostess

<http://www.control.com>

CONTROL: A worldwide supplier of connectivity products including RocketPort and Hostess controllers for ISA and MicroChannel compatible microcomputers. Developer toolkits are also available for integration into Windows, DOS, and UNIX applications.



Worldgroup

Top News...

on the 'NET

Visions Magazine

Feedback

PRODUCT Info

TECHNICAL Support

DOWNLOAD Worldgroup Client

About GALACTICOMM

Copyright © 1995 Galacticom, Inc.

This World (TM) The NET (TM) Visions Magazine (TM) Feedback (TM) Product Info (TM) Technical Support (TM) Download Worldgroup Client (TM) About Galacticom (TM)

<http://www.gcomm.com>

Galacticom, Inc: Since 1985, our corporate mission has been: "To do really cool things in the field of computerized communications and make a buck at it." When you see what we've packed into Worldgroup, we think you'll agree. Download Worldgroup Client software from our site.



Welcome to

Hayes

Increasing the Speed of Business™

What's New

Product News

Where to Buy

<http://www.hayes.com>

Hayes Microcomputer Products, Inc: Developer and manufacturer of PC, Macintosh, and PCMCIA modems, communications software for PCs, Windows, Macintosh computers, and high-speed serial ports to protect and enhance data transmissions.



WebSoft

Last Update OCT 31

Table of Contents (Click a Red Button)

Home

Internet

News

General

Support

Index

<http://www.esoft.com>

eSoft, Inc: We got our start 14 years ago with TBBS. Now The Internet Protocol Adapter, or IPAD, is our primary product. The IPAD lets you build a full-function Internet presence without specialized expertise.



Click here for Literature Requests

Information about Logicom


Software developed by Logicom

Product Info about WorldGroup

Other software from Galacticom

<http://www.logicom.com>

Logicom, Inc: Your Worldgroup Source and Galacticom's largest Ambassador Reseller. Check our site for information on the Total Internet Turnkey System, that combines a Web Server, Independent Online Service, Internet Server, and Fax Broadcast Server all in one.



High Velocity Software

MajorBBS/Worldgroup Info & Add-Ons

The Rock Garden BBS

High Velocity Software is based out of Phoenix, Arizona, and is dedicated to producing high quality software for use with Galacticom's The Major BBS and Worldgroup platforms. We have been in business since 1982, and work in all facets of the software industry, implementing, maintaining and business applications, as well as doing personalized consulting and system design.

Cool stuff that we like... something on the lighter side.

The High Velocity Software staff is:

- Jeff Maloney - President
- Mike Conway - Vice-President/Programmer
- Kelly Schulte - Secretary/Accountant
- Julie Sharp - Programmer
- Robert Terberg - Programmer

High Velocity Software, Inc.
P.O. Box 11142
Phoenix, AZ 85066

<http://www.hvs.com>

High Velocity Software: Dedicated to producing high quality software for use with Galacticom's The Major BBS and Worldgroup platforms. Just give us a call and tell us what you are looking for. We provide everything from basic system design to custom applications.



Welcome to DataSafe Publications, Inc.!

Updated 11/22/95

Publications, Inc. is an ISV (Independent Software Vendor) and Ambassador Dealer for Worldgroup. This WWW server is running on our custom BBS using Worldgroup v1.0 and MajorBBS.

<http://www.dsafecom>

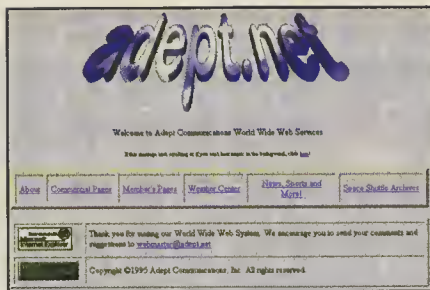
DataSafe Publications, Inc: Efforts to customize The GaRbAGe DuMP, our own 135-line nationwide BBS, lead us into becoming a software vendor and Ambassador dealer for The Major BBS and Worldgroup. We write our software and thoroughly test it all on our live system.



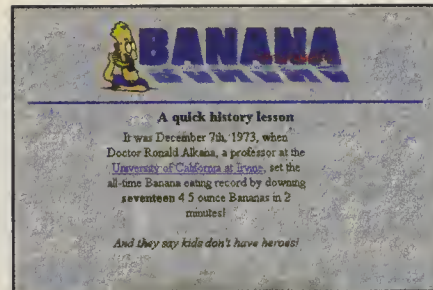
http://www.absbank.com
American Banking Systems: The first company ever to introduce software and services to accept check payments online, ABS is now the leader in online financial transaction processing. We feature Online Checks Direct, Credit Card Pay and our brand new Web Pay suite.



http://www.excalbbs.com
Excalibur is the original Windows Based BBS and now has full internet connectivity. All it takes is a simple internet connection and you can wire your BBS to the world. See why Windows Magazine named Excalibur BBS to its 1995 Win 100.



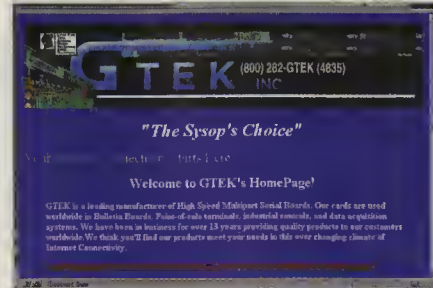
http://www.adept.net
Adept Communications an Independent Software Vendor (ISV) for Galactico software as well as third-party software developer. We're also a major internet service provider offering affordable telnet-only accounts and more.



http://www.banana.com
Banana Programming: Developers of BananaCom, widely considered the world's easiest-to-use terminal program. Operators of the Montana Banana BBS.



http://www.spacestar.com
Spacestar Communications is your on-ramp to the information super-highway. Spacestar provides you with a quality service for a value price. Whether business, education, government, or individual, Spacestar has the right Internet access solution for you.



http://www.gtek.com
GTEK is the leading manufacturer of High Speed Multiport Serial Boards. Our cards are used worldwide in Bulletin Boards and data acquisition systems. We have been in business for over 13 years providing quality products to our customers worldwide.

CINECOM

DESKTOP CONFERENCING

703.680.4733

http://cinecom.com

AVAILABLE NOW

CineTalk
 File Setup Help
 Heather Taylor

CineVideo
 File Setup Help
 Bob Summers

BBS Software & Hardware



Wildcat!

"The World's Most Popular BBS"

Wildcat! Single Line	\$78
Wildcat! MultiLine 10	\$160
Wildcat! MultiLine 48	\$320
Wildcat! Suite 250	\$629
wcCode, wcBilling or wcGate	\$99
wcPro Utilities	\$69
Q-Modem Pro for Win or DOS	\$70
Q-Modem Pro for Win95	\$89
Q-Modem Network 5-user Win (2 only)	\$175
DesqView 386 w/QEMM	\$105

Wildcat! v5 for Win95 & NT Coming Soon!

RIPaint v2.0 from Telegrafix **New!**
\$139

RIPaint with BBS software on same invoice \$129

Wildware! - Wildcat! Add-ons

wwVerify call-back verifier	\$20-\$30
wwNewUser	\$15-\$25
ww Database Bus.Edition	\$20-\$30

Many More! Download Working Demos!
Wildware! BBS (209)277-3005

Digi International

Digiboard PC/8e	\$499
Digiboard PC/8i 12.5 mhz	\$730
Digiboard PC/16e	\$829
Digiboard PC/16up (16550 UARTs)	\$629
We sell all Digi products	Call

WorldGroup from Galaticomm

WorldGroup Client/Server 8-line	\$375
WorldGroup Client/Server 20-line	\$699
WorldGroup Internet Server 20-line	\$1295
User 6-pak (license increase)	\$199
Shopping Mall	\$179
Search & Retrieve	\$145
RIPaint from Telegrafix	\$139
Intelligent Serial Kit 115k 16-line	\$1799
Intelligent Serial Kit 115k 32-line	\$2399
Galactiboard 8-port serial card	\$467
Client/Server Developers Kit	\$295

G-Tek

BBS-550 8 port serial card w/cables	\$395
Black Board-4 4 port w/Cables & Guardian Circuit	\$225
Black Board-8 8 port w/Cables & Guardian Circuit	\$525
Smart Card 8 8-port w/cables	\$635
PCSS-8TX w/cables	\$489

Boca

16-Port ISA BocaBoard, RJ-45	\$239
2 BocaCables RJ-45 to DB-25	\$15

Control

RocketPort RA 16, RS-232 Interface, cable	\$749
RocketPort RA 8, RS-232 Interface, cable	\$439

CD-ROM Disks

Night Owl 15	\$17
Softvault Sapphire	\$17

4 Port Serial Card

STB 4-Com w/16550 UARTs Great w/Wildcat!	\$105
10' Modem Cables (4-pack) DB-9 to DB-25	\$23

Prices do not include shipping charges.
 We accept Purchase Orders (OCA) & C.O.D.'s
 Most orders shipped same day



Since 1991
BBS Technologies

Sales Info: 209 498-0200 FAX: 209 237-0206 BBS: 209 498-6533 Orders Only: 800 563-9198
 P.O. Box 4290 - Fresno, CA 93744



David Hakala first appeared in *Boardwatch* in February, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at mailto:david.hakala@boardwatch.com or at (303)973-6038.

DIRECT DIAL by David Hakala

TULSA'S BLACK GOLD BBS – 15 YEARS OF CHANGES

Roger Ridgway started the *Black Gold BBS* in 1981, the days of \$2000 30 Mb hard drives and \$600 1200 bps Hayes modems. It quickly became a prominent system of over 1,000 members.

Today the board at (918)272-7779 or <telnet://bgbbs.com> is still a pillar of the local community, while its operators have branched out into the global market of the Internet.

Ridgway gave the Black Gold operation to Michael Cline in 1989. Ridgway's computer business, High Technology Computer Center, fully occupied his energies, and left him little time to further develop the board. Cline has grown the BBS into a conglomerate of three related companies.

Black Gold has always emphasized person-to-person communication. It was one of the first BBSs to pipe in Internet newsgroups and e-mail via Pagesat and Planet Connect. It carries all major echomail networks (over 10,000 conferences) and processes over 500 Mb of mail per day. An average of 3 million

messages, all less than 7 days old, are online at any given time. The system also sports over 300,000 shareware files; shareware authors upload over 500 new programs per month, and the staff collects even more files from all over the world. Over 100 door programs provide entertainment, shopping and information services. You can play chess or golf, Doom or Heretic. You'll find hardware and software in PC Catalog, a mate in the matchmaker or a job in the FedJobs databank. This is a *big* place! A 10base-T network links nineteen PCs to keep the whole thing running.

A new company, *OKNET/Tulsa SuperNet*, was formed in 1993 to provide direct access to the Internet for Black Gold BBS and SLIP/PPP access for its members. In partnership with South Coast Computing Services, OKNET provides high-speed connectivity between Tulsa and Houston.

A third company, *Tulsa Info*, was formed to provide Internet system design, programming and connectivity services to businesses within a 100-mile radius of Tulsa, including dedicated lines up to T1 speeds and ISDN lines. Tulsa Info also maintains the



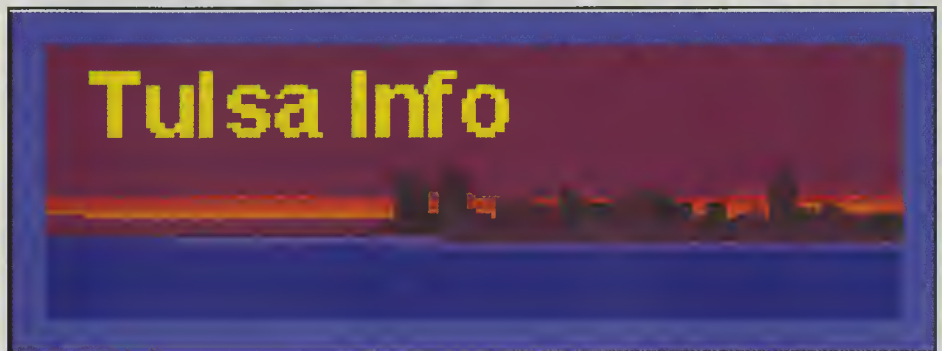
Roger Ridgway, founder of Black Gold BBS

Tulsa Web business showcase at <http://www.tulsaweb.com>. The web site offers the Tulsa 300 database of all Tulsa businesses with 100 or more employees, community resources such as animal shelters and tourism information, real estate listings, government information and international trade resources.

Business is booming on the Internet side of this business, which subsidizes Internet access for Black Gold BBS users. Full access to the BBS, ftp, telnet, SLIP/PPP services costs as little as \$0.45 per hour, depending on how many hours are purchased at one time; packages range from \$10 to \$100.

The whole shebang sounds more like a Fortune 500 conglomerate than a small local business. But while the Black Gold team and its partners have enthusiastically embraced the many opportunities of worldwide commerce on the Internet, they remain firmly rooted in their community. Their huge, active BBS will always be there for the people of Tulsa. ♦

CORRECTION: In last month's column, we misspelled the name of Internet software developer MurkWorks, Inc.



A hobby BBS became three online service businesses

THIS MONTH'S LIST — CHICAGOLAND AREA CODES 219, 312, 630, 708 and 815

The world's first BBS went online in Chicago, and is still there at (312)545-8086. It comes as no surprise that this metropolitan area of 7,687,191 residents (U. S. Census, 1994) supports some 839 BBSs today. The nine-county metro area is served by five area codes, making it rather difficult and expensive to maintain an accurate, comprehensive list of BBSs. Nonetheless, several people have done so over the years.

Paul Chartraw started the Stillwater's Chicago Area BBS list back when Boardwatch lacked a Letters section. The name was changed to The CBBS List a few years ago. Pete Anvin took over the updating duties when Chartraw moved to California; then he too got a new job and location.



Today, Phil Congleton, a 25 year-old assistant sales manager at a Service Merchandise discount department store, administers the CBBS List with help from his wife Donna and a host of helpers: Roger Heath, Don Rieb, Max Kohn, Mark Wolfe, Glen Dunlap, Joshua Landess and Dave Holler all have their hands in it. The team also depends on sysops and callers to keep the list up to date.

The list is available from Congleton's *Wolf's Den BBS* at (708)673-8070. Wolf's Den is a 4-line Wildcat! system that emphasizes gaming and role-playing adventures. It also serves as

the hub for several file and echomail networks, and has a large collection of sysop support files.

The CBBS List can be found on the Internet via Roger Heath's *Windows TechKnow* site: <ftp.win.net/winnet/techknow> and <http://204.137.229.56/cbbs.html>. Heath also runs an Excalibur BBS system at (708)729-2902 and maintains a huge collection of Windows files. Windows TechKnow is also a full-service Internet access provider offering SLIP/PPP connections, full news-group feeds and over 40 gigabytes of ftp-able files. ♦

839 CHICAGO

219-232-1484	Simple Simon's BBS	312-262-3626	After The Bars	312-583-1745	JTsoft Support
219-256-1357	Wolf's Warehouse	312-263-0924	Assembly Not Needed	312-583-1745	PCSource
219-256-2255	Radio Daze	312-271-4733	People Who Need People	312-586-3621	Tourist Trap
219-262-0910	US BBS	312-274-6128	FairPoint	312-587-8756	Crossroads
219-262-1370	After Five	312-274-8136	National Islamic	312-588-4231	Intelligent Shades of Blue
219-269-9459	LUG	312-274-9515	Insane Domain	312-589-2377	SCSI Peripherals
219-277-5565	MOM	312-275-1785	20/20	312-594-0813	Midnight Connection
219-287-4326	Treasure Chest	312-278-1195	Aircrash Bureau	312-604-8715	School Board [Teachers only]
219-288-8483	PepperGrass Express	312-278-5911	Vato Land	312-616-1071	BYTE demolink
219-289-0282	Northern Star	312-281-6046	Pisces Financial	312-631-3467	Emergency <Emergency info>
219-289-9123	ST Outpost	312-281-7018	Lakeview Links	312-631-7191	MicroLink
219-293-6465	Beta Connection	312-282-4851	Tech Support Resource	312-637-0585	Imperial City
219-324-4713	Rob's BBS Arcade	312-282-8605	WorldWide Access	312-637-3205	XXX-Perts BBS
219-325-0033	Planar Board	312-283-0559	Chinet	312-646-6523	Ever-Random Llam
219-325-3655	Rob's BBS Arcade	312-283-3919	New User	312-646-6615	Up All Night
219-374-8856	Twilight Zone	312-283-4035	Chicago Megaphile	312-649-0490	Emergency Nurses Assoc.
219-447-3011	Fire Department	312-284-7133	Fourth Dimension	312-661-1740	Law MUG
219-453-4046	TIP Express	312-286-2491	Psycho System	312-665-0065	Ripco
219-464-1066	Lighthouse	312-286-5715	Piper's Term	312-665-7319	HOME AGAIN!
219-464-9075	2-Way BBS	312-286-7870	Flying High <Aviatht sim>	312-684-9267	Snow's Dorm
219-464-9164	Christian Connection	312-334-8638	Final Frontier	312-685-1136	Silent Circle
219-659-0112	Special Needs	312-334-9092	Talamasca	312-685-2393	Cougar's Compound
219-659-7205	North Lake NixNet	312-338-0632	Point	312-685-4008	Silky's Chambers
219-662-0986	CommLink	312-342-0015	BBS-Chicago II7	312-693-1223	IBEW Local 1220
219-663-3107	Bad Connection	312-342-7652	Windows World Network	312-723-8434	King James
219-663-9177	Crown Point	312-348-3508	Starz	312-725-2758	Alternate Dimension
219-674-5292	Panoptic Net	312-353-2382	VARO Chicago Property Mgmt.	312-725-6628	Mr. Blotto
219-674-6243	E.T.'s	312-362-5368	Illinet Onli Uncover	312-727-5043	Bell Microcomputer Club
219-674-9288	Mouse	312-374-0039	Chicago Trading Post	312-728-0115	Loverboy's Lair
219-696-3415	Toolkit	312-380-7603	ExIS Inc. DataEase Support	312-728-7784	RuneQuest
219-736-8831	Shear Delight	312-384-0518	Microlog	312-732-5790	Fibber's Closet
219-762-2141	Info=Power	312-384-0616	Stygian Abyss	312-735-0690	Ghostrider's Lair
219-762-3775	Indiana Online	312-384-7957	Chicago Country C&W	312-735-1879	Engine One
219-763-2031	Sometimes	312-384-7957	PC.DOC FREE SUPPORT BBS	312-735-2512	Axis
219-836-4072	Source	312-384-7957	Pleasure Palace	312-736-5415	Bu\$inessman's Special
219-844-3580	F.Y.B.I.T.S.	312-395-9453	Temple of Flesh	312-736-7388	I Can!
219-844-7952	Rest of Us	312-413-3914	Valhalla	312-738-0350	Angel's Paradise
219-873-1949	Mike's Host Mode BBS	312-419-3453	Little BBS	312-743-1769	Real Estate Forum
219-874-2074	Beeline Super	312-427-6291	Law View	312-743-9452	ZOO
219-875-3960	ACES	312-434-0142	Blade Shop 64/C128	312-751-1503	InfoComm Co
219-922-9441	BioTech BBS	312-436-0559	COPH	312-761-1116	Ceasars Gyrp Palace
219-923-7611	Excaliber	312-436-3580	Lith-X	312-761-2155	FreeBase
219-926-2060	Restoration Rock	312-436-4505	Insomnia Central	312-764-0591	Midas Touch
219-929-4254	Crystal Palace	312-473-7741	Krishna Yoga Foundation	312-764-1699	Dial-Your-Match 206
219-929-5574	Lake Effect	312-474-0410	Lost	312-767-1572	CHICAGOOnline
219-932-1634	Loose Change	312-476-1508	Battle of Evermore	312-767-5787	PUB Desktop Publishing
219-942-6746	Rock-N-Roll Hangout	312-477-8243	Lane Tech BBS	312-767-6678	SouthSide Pride BBS
219-942-8204	Picture Perfect	312-478-1439	Fremen Mountain	312-768-5853	Top Gun
219-980-4619	Village	312-481-9625	Brontosaurus	312-769-1323	NiteBeats
312-202-0932	Excellent BBS (NOT!)	312-506-8942	Chicago's Amature Erotica	312-769-2020	20/20
312-202-8066	Razor's Edge	312-506-9691	GUI Programmers	312-772-2452	Orgasm!
312-202-8072	Pol BBS	312-506-9823	Motocicleta <Motorcycles>	312-774-4861	Calling all Sports
312-205-0915	Malkavia BBS	312-528-5020	Ripco II	312-774-6698	SQLBBS <SQL>
312-227-7455	Midwest Biomedical Society	312-535-8282	CPSnet (Public Schools)	312-774-9631	Phone Booth
312-233-9607	Chicago Machine	312-535-8512	CPSnet (Public Schools)	312-776-2383	No Ratio
312-235-7948	Bighead	312-539-1625	Sweet Home Chicago BBS	312-776-9768	N9CSA N.A.B.S.A. of Chicago
312-237-2773	Coliseum (Home of dotSYS)	312-545-2225	Mask	312-777-2574	East Village
312-237-6120	Game Room	312-545-6871	Realms of Horror 64/CL64	312-777-9480	Round Table (A)
312-244-2484	Windy City	312-545-9793	WormWood	312-778-3287	Terminating Experience BBS
312-248-0109	Thunderbolt (signup line)	312-549-0822	End Complete	312-784-1752	Technological Advantage
312-248-0900	CCS BBS /	312-561-2382	Bear's Den	312-784-3019	Chess Board =2=
312-248-0900	Chicago Computer Society	312-568-1965	Graveyard	312-792-1374	Cell Block 9
312-248-0900	MCSNet (Chicago)	312-573-0538	Omega	312-792-8292	Pinnacle
312-248-3809	Chicago Conservative	312-573-1989	Omega	312-865-3125	Tangerine Dreams
312-248-6295	MCSNet [PEP only]	312-581-1180	Cellar	312-871-5032	JENA
312-252-0642	Dickie's Place	312-582-2458	Big Den's Pen	312-878-6030	Jesus People USA - CFC #43
312-252-3663	Culinary Connection	312-582-4657	Corona	312-881-1142	Jim's Fly Inn
312-254-3413	Equinox	312-583-0053	Cosmic's Universe	312-881-4356	Marist
312-258-8423	Vivacious Vibrations	312-583-1674	JBS-BBS	312-889-8481	InfoChi System IAS

312-902-3599 CompuErotica
 312-927-9534 Monsoon Hotel
 312-929-0824 Windy City GIF Cache
 312-935-6809 Bit Wiz
 312-944-6044 Online Unlimited
 312-975-7209 Yogi's Adult Only BBS
 312-986-0974 Chicago Confuzion/EMS
 312-989-0190 Nezuld's Domain
 312-989-9316 Cafe Spagmumps
 312-993-3475 Illinois CPA Society
 312-996-8844 Illinet Onli Uncover
 708-205-0935 Entropy
 708-213-3606 ILLUSIONS OF REALITY
 708-213-5690 Hanover File House
 708-215-8614 VTech Video Technology Corp
 708-222-1540 Holy Grail
 708-223-6408 Dead Zone
 708-223-6941 Bomb Shelter
 708-223-6941 File Sponge
 708-229-0665 Suburban File Fountain
 708-232-0565 Lunatic Phringe Chat BBS
 708-232-1015 Windmill [9600+ only]
 708-232-1250 Windmill
 708-232-6339 P.S. Meeting Room
 708-232-7577 DuPage Library System
 708-232-8140 Faster Disco III
 708-232-1091 MED-SCI BBS
 708-234-8169 Cactus Ranch
 708-238-1776 Mensa
 708-246-0539 Little Wing's Paradise
 708-247-9068 Power Palace
 708-249-7890 White Light
 708-251-1725 Infinity Online
 708-251-5049 Mountain BBS
 708-252-8241 NEWTON
 708-253-6224 Mount Prospect Public Library
 708-255-0002 Hemisphere
 708-256-5440 Programmer's Heaven
 708-257-8037 Keeper's Inn
 708-258-0048 Station 1
 708-258-6475 Station 1
 708-259-0215 Arte' Graphics
 708-259-0474 Software Express Line
 708-259-1146 Greater Chicago Diving Board
 708-259-8549 Affordable Service & Parts
 708-260-8818 Adline USA
 708-260-9660 Working with Works
 708-261-0947 Atrocity Exhibition
 708-263-3509 Bianca's Toy
 708-263-5366 High Meadow BBS
 708-263-7221 Black Hole
 708-265-0697 Uncle Bob's
 708-265-6526 Ministry of Truth
 708-266-9644 Mana BBS
 708-279-1647 FS Midwest
 708-279-8562 Psycho
 708-279-9647 Knight Skies
 708-289-0034 Outer Limits (B)
 708-290-9993 Snarf's Music Studio <Sound>
 708-291-6660 Rest of Us MUG
 708-293-5975 Social Goats Realm
 708-295-0077 Illinet Onli Uncover
 708-295-6926 MACropoedia <Ham/Mac/PC>
 708-295-8703 Rival
 708-295-9133 Resputed
 708-297-1591 Chicago
 708-298-1600 Outer Edge
 708-298-4121 O'Hare Oasis
 708-299-0060 Eater's Club

708-299-0687 Eye Resources Network
 708-299-5140 Zoot's Place
 708-299-5162 CompuJudaica BBS
 708-299-7220 LOOP Premium Graphics
 708-301-2948 Despair II
 708-301-6465 Age of Information
 708-301-7316 Animal House 8-
 708-304-0666 Nybble's Byte
 708-304-9804 ExpresSearch
 708-304-9804 Personal Connection
 708-305-0233 GENOCIDAL REVOLUTION
 708-307-8596 PCPS Support
 708-310-9014 ST Outpost
 708-325-9272 Swan System
 708-329-9755 Comics Online
 708-331-4494 Photo Exchange
 708-332-2788 Quagmire
 708-333-4772 DeadBeatt Page
 708-339-6182 Lar-Mar Production
 708-345-7202 Intercept
 708-350-7863 Microsource
 708-351-8815 Amiga Doc
 708-352-0948 SandV - OS-9 Users Group
 708-352-9231 Cess Pool
 708-352-9282 Macinations
 708-354-2049 St. J's BBS
 708-355-6469 Naperville Library (type opac)
 708-355-6942 Micro Overflow
 708-355-9528 Illinet Onli Uncover
 708-356-4417 ChiTown Network
 708-356-5633 Scandal's
 708-356-6897 Nessy Games System
 708-356-7107 Singularity Station
 708-358-5041 Fantasy Land BBS
 708-359-0545 Alderaan System
 708-359-2050 MAX Communicatiok Forest
 708-359-8080 PalNet
 708-359-8761 Black Forest
 708-359-9835 Dragon's Den
 708-361-2436 City of Illusions
 708-362-7875 Computers for Christ #11
 708-365-2155 Silent Society
 708-367-1871 WorldWide Access
 708-369-2577 Brain Storm
 708-369-8725 Airlock 12
 708-369-9183 Gus 'n Golf <Mus>
 708-371-4892 In Debt
 708-372-0094 Off the Wall
 708-377-5988 Fox Valley
 708-378-0045 Rational Tech Info Center UX
 708-382-2435 Burnt Cheese BBS
 708-382-2844 VR Studio
 708-386-2825 Obsidian Systems
 708-388-1723 Computer Connection
 708-390-7398 Palace O Fun
 708-392-0188 Arlington Hts Public Lib.
 708-392-0460 Smileyface Inc.
 708-392-8209 Arlington Hts Public Lib.
 708-393-3734 Recycled Rubbish
 708-393-4241 Demonic Primates
 708-394-0071 Samson
 708-394-5058 Rockhouse Crew
 708-395-0991 Night Train
 708-395-1253 RichWare Shareware
 708-395-5140 Air Power
 708-397-0506 Photography
 708-403-2131 Destination Nowhere
 708-406-7978 DCSwingers Adult
 708-406-7978 DeltaCom!

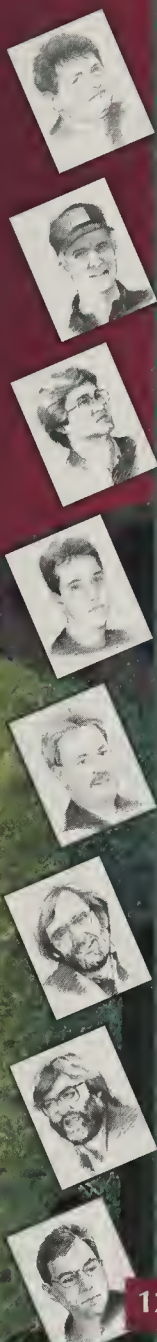
708-418-5805 Alpha-Complex
 708-420-9678 Black Death
 708-423-1468 Rick's Cafe American
 708-425-4380 Jack's
 708-426-8228 Shop
 708-426-8612 Gruntville BBS
 708-426-8903 American Archive
 708-427-0679 Break In
 708-428-0436 Glenside's Cup of Coco
 708-428-6125 Murphy's Place
 708-429-9160 Medfirst
 708-432-2558 Corpsmans Corner
 708-432-2659 River Styx II
 708-432-9028 Point Zero
 708-432-9683 Interactive Imagination
 708-433-7509 Squirrel's Next
 708-437-5378 HomeLink SHAREWARE BBS
 708-438-5065 Alpine Village
 708-438-5351 Lake Zurich Wildcat
 708-439-4708 Database II
 708-439-4811 Salem's Lot
 708-439-5769 Kooler than Jesus
 708-441-5780 Vox Populi
 708-441-9122 Island Paradise BBS
 708-442-8020 Star Base 428
 708-442-8117 Lyons Den
 708-447-3857 Chicago Transfer Authority
 708-449-8291 Earth Port
 708-450-1832 Earth Port Outpost
 708-453-0998 Sky's the Limit
 708-453-1321 Sun, Surf & Serenity
 708-453-5589 Clip Heaven II
 708-455-8465 sky 13
 708-456-6875 ST Center
 708-457-2219 Blue Moon
 708-458-1143 Chi-town
 708-458-3188 Quad State
 708-459-7267 Hell Pit
 708-460-8707 My Sin
 708-462-1508 Wheaton File Exchange
 708-462-2572 Info Expressway
 708-462-7560 Prince Charles Message Srvc
 708-464-0120 Digital Overdrive
 708-465-0924 Master Soft On-Line
 708-468-7463 Time Warp
 708-468-7641 CrAsH*PaLaCe*BBs
 708-468-9837 Solaris VII
 708-469-3924 T-COM BBS
 708-469-4850 Laser Stuff
 708-469-9510 Phantom's Lair
 708-473-5334 United
 708-473-9327 T.N.T. Disk Company
 708-479-4003 NoVa BBS
 708-481-2211 Pro-AppleTree
 708-481-4177 Integrated System Solutions
 708-482-0404 Optimus BBS
 708-482-4477 IrishEyes <Notre Dame sports>
 708-483-2890 EAA Chapter 153 <aircraft>
 708-484-3778 Mellow Land
 708-485-7185 DJ's Radioactive Headwound
 708-485-7187 DM's Discretion
 708-487-1093 Timber Lake
 708-487-6859 Seige BBS
 708-489-0031 B&R Enterprises
 708-491-3070 Northwestern Univ. Library
 708-491-9070 Highway 66
 708-497-4956 Widow Maker
 708-501-4851 Fully Automatic
 708-509-9114 1BBS

839 CHICAGO BBSs

708-510-3455	Digital Oasis	708-622-0556	Andromeda	708-705-7094	EMTech Systems'
708-510-7535	Livein on the Edge	708-623-1125	Waukegan Public Library	708-705-7263	Home Brew University
708-510-9087	REALITY.SYS	708-623-2075	Heaven's Gate	708-717-1086	Vampire's Lair
708-513-1034	MidWest (A)	708-623-2226	Waukegan Public Library	708-717-9370	COM*ONE
708-513-1034	Midwest Systems	708-623-4440	Greymark	708-724-0975	So That's Whatcha Call It
708-513-5932	Shadow <Mac/IBM>	708-623-4988	urty Plus BBS & Friends BBS	708-724-2447	SaveWare Shopping
708-513-6358	Nocturnal BBS	708-623-9570	Pegasus (A)	708-724-2600	Simple
708-513-6934	NC-17	708-628-0330	Maranatha	708-724-6715	Dragons Hoard <Gaming>
708-516-8692	Hot Mix	708-629-9293	Renegade	708-725-2189	Mona Lisa
708-517-1898	SGS-Thomson Apps Lab	708-632-0274	GridPoint	708-729-2902	Windows Techknow(tm)
708-518-8336	RadioLink	708-632-0757	Perspective Reality	708-730-3020	Twister's Palace
708-519-1699	Burbs	708-634-2828	Graphicon <Amiga>	708-731-2806	Josies Sweet Revenge -TDH-
708-520-2659	Universal Depot	708-635-7013	Northbrook Haven	708-734-1177	Computer Sports Connec.
708-526-1472	TecNiCom Systems	708-635-7427	Dungeon	708-734-1350	Danger Zone
708-526-2334	Comm Suite	708-635-8050	Daze Inn	708-739-0033	Chicago Family Center
708-526-4143	Wauconda Education Station	708-636-0956	Sunset Ridge	708-739-3022	Heaven on Earth
708-526-4161	Phoenix Fantasy Hide-Away	708-636-6694	Suburban Software	708-739-4813	Loxodonta
708-526-8545	Robbie's Retreat	708-636-8259	Satalite	708-739-5169	Cage
708-527-9574	Zorda	708-637-0071	Zone	708-739-9355	My House
708-529-1586	Elk Grove Repeater	708-637-0900	MCSNet (Naperville)	708-740-7953	Lakeside BBS
708-529-6714	#1 Compusmart Online	708-637-8528	Shadows of Hell	708-741-1995	Prime Time
708-530-0194	Computers Are Easy U G	708-640-0073	Red+Sky	708-741-8301	Round Tripper
708-530-1694	Renaissance Faire	708-652-9278	Fire House	708-742-6503	Trolley Park BBS
708-530-4305	Clockwork Apple 2	708-653-0376	Disillusioned Society	708-742-9930	Wild Majik
708-530-4850	Speed Shop	708-653-3780	South o' the Border	708-746-0377	Hotel Kalifornia
708-532-5759	PC Gremlins RBBS WarBoard	708-653-6089	Hotel Amiga	708-746-0548	Flat Cat Alley
708-532-8209	Great Lakes Region CAP	708-653-7092	VFX II	708-747-6311	Enchantica 64/C128
708-535-9937	New Demension	708-653-9076	Racer's Edge	708-748-0655	Our Place
708-537-4663	Radio Hill	708-655-0746	Shadowland	708-748-4025	Space City
708-539-1839	Apocalypse BBS	708-655-1483	Axon	708-748-7449	Computer Room
708-540-7341	Terabit Technologies	708-655-1855	Shallow Ground	708-752-0174	It's a Free Country
708-540-8424	Friends of Revilo	708-656-9776	TBSI BBS	708-752-1909	Unity
708-543-4234	Doom	708-657-1113	Spectrum MACinfo <Mac>	708-754-0431	Time to Kill
708-543-4629	Panther Post	708-657-9543	Terrapin Station	708-754-2219	Afterlife BBS
708-545-0198	Virtual Graphics	708-658-3115	That's It	708-757-4810	Midnight Asylum
708-545-1410	Operation Shadow Project	708-665-2184	Bob's Sport Central	708-759-1916	Silver Tongue
708-546-0301	Castle KingSide 1	708-665-7892	Roundhouse	708-759-7039	Dolph's World
708-547-8360	D'O'l'Mans Online for Windows	708-665-9876	NeWare	708-759-7302	Jay's Place
708-549-0550	Digital Future BBS	708-668-1009	Reconstruction II	708-759-7908	Magrathea
708-549-0909	Great NorthWest	708-668-8344	KA3SHW Ham BBS	708-759-9214	TrendTec
708-550-6309	Hispanic Biz Mgmt - Ameritech	708-668-9096	Wizard's Tower	708-766-1089	UBU-Midwest
708-551-9275	Emporium	708-671-0237	InterAccess	708-769-4084	Lattice
708-552-7830	J&J's Pig Pen BBS	708-672-3668	OutHouse	708-771-7070	Blue Shamrock
708-554-6254	DarkHaven	708-672-5383	ProMedia	708-775-0315	Neverending BBS
708-564-1313	Electronic Toy Store	708-672-7611	CAPPS Remote	708-776-1062	Midrange System
708-564-4518	World of CD Roms	708-672-9131	Skid Row	708-776-2395	Warp Speed BBS (A)
708-566-5651	Dark Realm	708-673-3256	Gallows Pole	708-776-8289	Dragon's Lair <Gaming>
708-566-5973	Some Other BBS	708-673-8070	Wolf's Den <CBBS List>	708-778-0948	Spectre's Lair
708-571-0015	Liberty	708-674-1989	TechLine	708-778-8620	TurboSof <MIDI>
708-581-1505	Chicago Programming Soc.	708-677-1221	Nightmare Cafe	708-780-0116	Terminal Velocity
708-581-1735	Corner Cafe BBS	708-677-3369	Absolute Pleasure	708-780-9287	GIF(t) Exchange
708-581-1735	Serbian-American Info	708-677-6569	Revolution! Online /	708-782-0948	Cue Ball Online
708-581-1735	TMS	708-677-6824	Warp Speed (B)	708-785-1236	Bryan's Place
708-582-0146	X-Files	708-677-7629	Starfleet Command	708-789-3610	Code One
708-582-4442	Galatic Nebula	708-680-5105	Python	708-790-2025	Analogue Bubblebath four 2
708-582-4704	Board Room	708-680-9420	London Underground	708-790-8272	Ill Communication
708-587-0309	Horse Feathers	708-680-9440	London Underground	708-795-1203	Mega Soft-Ware
708-587-2398	Security <survivalist>	708-681-4722	Suburban	708-795-4442	Chicago Syslink
708-587-5389	Greater Chicago AutoCAD U.G.	708-682-9034	St Charles Graphics Xchange	708-799-7756	Dial-Your-Match 102
708-587-9837	enside CoCoRama BBS	708-682-9211	St Charles Graphics XChange	708-801-0823	H.U.R.K.
708-593-8703	Natl. PC and MIDI Data Bank	708-683-3666	Great Cavern	708-803-2146	CompCity
708-595-1894	Win-dy City Windows	708-687-4413	PitStar	708-808-2264	Zlink-Com1
708-595-4132	Late Night	708-689-2151	Palantir	708-810-1174	New World
708-596-7556	Jail House	708-689-2959	CyberTown TBBS	708-818-8315	IL Institute of Virus Research
708-597-2684	Water Tower	708-690-2902	Hotrock's	708-820-8370	Aquila (Free Trial)
708-597-2911	WAFAR	708-690-9860	Laran Communications	708-820-8957	Great Library of Alexandria
708-598-1606	Virtual Village	708-695-1251	Micro Systems	708-823-0628	Distortions
708-599-1063	Hidden Treasures	708-695-4997	Hall of Horrors	708-824-2235	Life After Death
708-614-4914	Applied Computer Services	708-697-9572	Cyber Comm Networks	708-824-2235	Other Side BBS
708-615-0845	Beacon	708-697-9778	North By Northwest	708-825-7106	NW9J

708-827-3619	AlphaOne Online	708-892-3449	Park Place	815-223-6413	Egg
708-830-2597	Pirates Cove	708-893-5601	Sins & Vices	815-334-9369	Digital Dungeons
708-830-5852	Hell's Front Gate	708-893-6746	Emerald Isle	815-337-0191	BMC West
708-830-6387	Scruncher	708-894-1126	Bulletproof	815-337-0279	ESP-BBS
708-830-8805	Dog House <Amiga>	708-894-9059	SWW Weather Center	815-338-0579	Phishnet BBS
708-831-1595	Six Feet Under	708-894-9989	Chicago PC Jr User Group	815-338-1627	Dazed and Confused
708-832-2760	Megabyte Hotel	708-895-1926	Republicans On Line	815-338-6629	Flannigan's Funky Funhouse
708-832-7754	Addison DOS Haus	708-895-4042	Greater Chicago Online	815-338-7225	Hang-Out BBS
708-833-8126	Vpnet	708-902-0497	File Depot	815-356-7061	Nightline BBS
708-834-1450	Mortgage Market	708-904-2149	GREGdoor	815-363-1351	Dark Globe
708-835-3205	Grey Matter	708-910-3079	Liquid Data	815-363-9788	Virgies' BBS
708-836-0114	MultiBoard	708-910-3964	SIGS - 1 4 U	815-385-5031	McHenry
708-836-0160	Shoppe	708-916-6343	Gold Dragon West	815-385-8366	C=YAI BBS
708-836-1730	Power Windows	708-918-1231	Innovators	815-398-4678	Magic Gateway
708-836-5008	Shadow Realm (B)	708-924-9406	Prgrs Free Source Code Soc.	815-433-0787	Pegasus (B)
708-838-0847	OutWorld BBS	708-928-0192	Group <People & activities>	815-434-2927	B&B Electronics
708-838-0919	Domain	708-931-7966	Watch City	815-434-4430	River City
708-838-8929	SunValley Amateur Radio	708-932-9767	Ace's Nebula	815-455-7279	File Depot
708-839-6911	Battleground	708-933-0203	Mischevous Spectrum	815-455-9783	Munden's Bar
708-843-2868	Techno Head	708-934-1649	Gospel Outreach	815-458-0138	Time Machine
708-843-2871	Majestik Moose	708-934-3045	Intimate Mansion	815-458-3910	Monkey Robinson's Corner
708-843-8750	Information Exchange	708-934-5517	Digital Data Labs	815-459-0825	I.C.I.X.
708-844-1469	Quest	708-934-6224	Zen Arcade	815-459-2645	Altered Reality
708-844-2191	Asgard+	708-934-8738	Youth Gone Wild	815-476-0407	Coal Valley PCUG
708-849-0073	1984	708-940-1241	Stratagem	815-477-8263	Far Side of The Sun
708-851-3929	MicroTech Amiga	708-941-1070	Nucleus	815-477-8349	Without A Clue
708-852-1292	CARMA BBS	708-941-7095	Trading Post	815-478-5026	Main Street
708-852-4694	Sensitive Gentleman	708-946-6478	Euphoria	815-633-0188	Apple Core
708-852-4893	Digital Crew	708-948-5754	Bozo Board 2	815-634-2186	Mike's Mess
708-852-5838	Celestial Haven (A)	708-949-4860	Outpost BBS	815-653-3332	Round Table (B)
708-854-0255	CAP/USA	708-949-5397	Sound Management <MIDI>	815-653-7902	Electrical Discharge
708-858-4469	ComPlex	708-953-4922	Scintillation	815-667-5020	3KG Utica Community
708-860-2496	King's Court	708-957-3546	Used Books	815-722-1081	Miskatonic Univ. <Paranormal>
708-862-0182	Chicago TI-99/4a UG	708-960-1480	Uncle Sam's	815-723-0510	Oatmeal Express
708-863-1766	Snuggler's Cove	708-961-1658	OS/2 Solution	815-725-4195	Multiplayer DOOM
708-863-2392	Ten Forward	708-963-0656	Greg's Place	815-726-2983	Bits by Bits
708-863-5285	C.R.I.S.	708-963-5496	Recovery Room	815-726-3911	Unicorn
708-864-5277	Give Me Liberty	708-964-0526	DuPage Project Associates	815-727-1195	Hook, Line, and Sinkers
708-864-6720	Evanston Public Library	708-964-4901	Identity Crisis	815-727-3398	Revelations
708-866-9402	Evanston Public Library	708-964-5281	God's Country	815-727-6072	Shareware Library
708-869-0389	Baha'i National Center	708-964-9610	Toolroom	815-728-0455	Pro-Ren
708-869-2136	Revenge	708-965-3098	Obloid Sphere	815-729-3494	Intercept Vector
708-870-0523	Renegade's Rendezvous	708-965-9481	DuffWorld	815-729-4707	do's Hideaway
708-871-9617	Graf/x	708-966-2342	City Limits	815-729-8585	Crypt BBS, The
708-872-3143	LAKE COUNTY ONLINE	708-966-4372	Easy Access	815-729-9793	Radio Free Illinois
708-872-4096	Sojourner BBS	708-967-6154	Digital Vortex	815-740-0081	Politics of Freedom
708-872-8010	MACrocosm	708-967-7157	Rude Attitude	815-740-1814	Tom's
708-872-8086	Lakes Region	708-967-7503	Martial Arts Academy	815-740-5625	Baroness's Bungalow
708-876-9594	Well of Souls	708-968-0149	Coordinate Axis	815-741-3544	Time Vortex
708-879-0480	Dan's Dungeon G Exchange	708-970-9839	Left Side of Normal	815-744-5579	Agima
708-879-8703	Wild West	708-970-9843	Always Under Construction	815-748-2539	Castle Anthrax
708-882-0067	G-Spot	708-972-3275	Hazardous Materials Info Exch	815-753-1800	NIU Connection
708-882-1101	XNet Info Systems	708-978-7287	Ground-ZERO	815-753-2308	NIU CEET
708-882-4187	Information Exchange	708-980-9544	Precision Board	815-765-3136	Inner Sanctum
708-882-5903	Computer's Plus More	708-982-0005	Sahakian's Business Info	815-786-6240	Resting Place
708-884-0133	GateWay	708-982-5092	U.S. Robotics Tech Support	815-834-0460	Depot
708-884-0169	Hoffman BBS	708-983-0279	Contium	815-838-3104	Colt
708-885-1913	First Byte	708-983-0523	Bases Loaded	815-877-2071	AWESOME GRAPHICS!!
708-885-2151	Information Exchange	708-983-3228	Mogyland	815-886-0109	Electric Estates
708-885-3450	ID/ST Vortex (Fido help) PC	708-983-5147	SunValley Amateur Radio	815-886-1982	Ron's World BBS
708-885-8865	OPOWD Crowd	708-985-3761	Shannara Odyssey	815-886-9388	CorpSoft
708-885-9983	Schaumburg Township Library	708-985-5784	Alienation K'afe	815-899-4702	College Town
708-887-1209	Parrothead Supplies	708-985-7775	T&R	815-935-5020	Tele-Rag 64/CL64
708-887-7685	Harvester Network	708-986-1295	North Pole 64/C128	815-937-6997	Madhouse
708-888-1112	Fox Valley CS	708-991-4406	Paper Eaters Anonymous	815-937-9834	Hagios Hodos <Christian>
708-888-3936	Tears of Isis	708-991-4879	Interstellar Overdrive	815-939-5187	Olivet!
708-888-7381	ECC!	708-991-7112	Amalgamated	815-941-0971	Digital Speakeasy
708-888-8613	Immortal Bob's	708-993-0461	Wild Onion	815-942-2930	Under The Influence
708-892-0399	Aquarian	708-998-0008	Nuclear Greenhouse	815-942-5015	Looney Bin
708-892-2811	Heaven	708-998-6727	Chicago Clipper/VO Users	815-943-3282	Spud the Amazing Neutron

BOARDWATCH



Don't take a chance. Subscribe now!

Congratulations!

As a Boardwatch reader, you are someone who cares about computers and is truly interested in technology. In theory, there are umpteen million people on the Internet and logging into bulletin boards, but here at **Boardwatch** we know just how rare someone is who reads a technical magazine.

Since March 1987, **Boardwatch**, the recognized authority and industry leader, has been bringing its subscribers up-to-the-minute information on the Internet, World Wide Web and BBSes - long before they were household words!

But if you're still waiting to become a **Boardwatch** subscriber you could miss out. Without a subscription, you won't be assured of getting monthly coverage on timely topics that only **Boardwatch** subscribers are guaranteed to receive.

- ◆ **Publishing on the Web** — detailed HTML tutorials, including source code on everything from implementing security to adding a video camera to your Web site
 - ◆ **Technology Front** — hands-on evaluations of breakthrough products for Internet Service Providers and content producers
 - ◆ **Dr. Bob** — revealing interviews with the most influential and successful Internet dignitaries
 - ◆ **Consummate Winsock Apps** — half a dozen of the best Winsock applications released each month
 - ◆ **Cyberworld Monitor** — investigative reports of how government and corporations are shaping the future of the Internet
 - ◆ **Education Link** — resource center and forum for K-12 and postsecondary educators
 - ◆ **Legally Online** — incisive examinations of court cases and legislation that affect the online business
 - ◆ **Speaking Javanese** — monthly tutorial on Sun Micro's Java/Hot Java language
- and much more!*

And the time has never been better if you've been thinking about subscribing. You'll get 12 monthly issues for only \$36. That's 40% off the \$4.95 cover price! Or, if you're in the market for a really great deal, you can get 24 monthly issues for only \$59. That's 50% off the \$4.95 cover price!

Subscribe to the premiere publication covering the online communications revolution — **Boardwatch** magazine.

Don't take a chance. The issue you miss might change your life.

For easy ordering, call TOLL FREE 800-933-6038

12 MONTHS FOR \$36

24 MONTHS FOR ONLY \$59

U.S./Canada/Mexico
12 issues...\$36
24 issues...\$59
Overseas
12 issues...\$99 (U.S. funds)

Name (print) _____
Company _____
Address _____
City _____ State _____ Zip _____
Phone _____

Please charge my:

☐ Visa ☐ MasterCard ☐ American Express Exp. Date _____
☐ Check ☐ Money Order Card# _____

For faster service, call TOLL FREE 800-933-6038

Satisfaction Guaranteed I understand that if I am not completely satisfied with my subscription to **Boardwatch Magazine** I may cancel my subscription at any time and will receive a full refund for all unmailed issues.



Boardwatch Magazine
SUBSCRIPTION DEPARTMENT

**8500 W. Bowles Ave.,
Suite 210
Littleton, CO 80123**

THE LIST

Advertise your electronic bulletin board/online information service in Boardwatch Magazine. Let our readers know who you are and what you're doing with online technology. To order a BBS ad in the Boardwatch Classified BBS ad section, call the Boardwatch BBS at (303) 973-4222 and use our online ad entry system. In addition to standard list information, enter up to 330 characters of text describing your online service - all for \$50 per month. Master Card or Visa only.

MicroSeller BBS (201)239-0001 Verona, New Jersey. PCBoard 15.x alpha site. NJ's preferred BBS for the Pro 12 yrs running. 20+ hi-speed 28.8K lines. Charter member BBS Direct provides local access #'s for easy access. Best quality latest files games info gold mine. Many mail networks including Internet. Trial access provided. Major credit cards.

The Spirit of Play (201)854-2728 North Bergen, New Jersey. Nothing but the spirit of play. Multi-player games including Doom, Doom II, Warpath, Spectre VR, Heretic and more. Come play with the world.

The Big Dog's BBS (202)635-1755 Washington, DC. Full Internet, Chatlink 24 hours/day and more. 7 day free trial for new users. Only \$6/month for 45 hours of Internet access. Multi-player DOOM and Descent. Online games, all the hottest shareware files. Any USENET newsgroups you want to see. Telnet 206.136.82.2 24 hours.SLIP account: \$6/month WWW:http://www.bigdog.com/tbd-home.html Web space for rent!

The Invention Factory BBS (212)274-8110 New York City, New York. New York's best BBS. Free downloads for new users. More than 14 gig of shareware and freeware. Internet, Usenet, e-mail. Large adult files area. MC Visa Amex.

Midnight Driver Super Data Highway (212)750-3643 New York City, New York. Free Internet mail and Usenet news. Tons of newsgroups. CDROMs with gigabytes of shareware online all the time. We specialize in games including the latest from Apogee and ID. The best buy around. Come cruise by and see what all the excitement is about.

Anarchy Online (214)289-8328 Dallas, Texas. Categories include: Computer hacking & cracking, drugs, fake ID, fraud & con games, locksmithing, phone phreaking, surveillance and survival. Encrypted e-mail. No ID verification. telnet: anarchy-online.com

ONIX (215)883-1900 Philadelphia, Pennsylvania. Philadelphia /King of Prussia. 38 lines, 45+ multi-player games. Files for Amiga, MAC, Windows 95, IBM. Live Internet services including SLIP/PPP, personal web pages, IRC, TinyFugue, etc, plus access to 24,900+ Usenet groups! Free month for new members. Onix was voted a Boardwatch TOP 100 BBS. Phila: 215-883-1900. KOP: 610-337-4903. Telnet: onix.com

PC-Ohio PCBoard (216)381-3320 Cleveland, Ohio. Planet Connect satellite connection. 22 email networks including the Internet as pco-hio.com. 100,000 files, 250 game doors, 5000 conferences. USR V.34+ 33600 modems at 216-691-3030. Now with full Internet access.

Asian Penpals! (301)203-0281 Washington, DC. Romance, friendship, love, correspondence. WorldClub BBS features a rotating file-base of 300 GIF photos and bio-data of attractive Asian ladies overseas who desire American penpals. Also: Asian XXX graphics, adult japanimation, adult Asia travel info, and much more. Internet newsgroups & e-mail. Adults only. Instant access. Call today.

The File Bank, Inc (303)534-4646 Denver, Colorado. ASP & AOP approved BBS with one of the finest collections of IBM compatible files. Many free download areas including extensive libraries of astronomy programs & data files. 500+ message areas, online games, chat & more. Vast files areas including adult files. With 24 lines & 35Gig of hard drives. VISA, MC, AMEX, Discover welcome. Voice support: 534-4538.

The Third Dimension Online! (305)473-8759 Fort Lauderdale, Florida. 16 lines, Running Worldgroup! Features too many to list! Internet Access, Slip, CSlip, PPP, Telnet, FTP, IRC, WWW, Gopher, Usenet and more. Online Weather, Shopping, Travel, Sports, Vast File Libraries, Lively Chat, Multi-player Games and much more. Free two week guest access. Secure Adult Entertainment Offered. Get online Today!

WORLDPORT HEALTH INFO ONLINE (310)831-6775 San Pedro, California. Files and forums for healthcare professionals, caregivers, patients and anyone interested in health. Traditional and alternative health files plus games and more. A unique BBS. We're new and growing fast. New files and features added regularly. Internet.

Compu-Erotica (312)902-3599 Chicago, Illinois. Chicago's LARGEST adult BBS with nearly 1 million served! If you like your chat hot, you'll love CEBBS. Alternate lifestyle chat-conferences, erotic shopping, active party calendar, unique features, internet mail and more! Women free after v/v. V/MC/D.

Xgraphics BBS (407)477-5756 Boca Raton, Florida. Mentioned in Erotic Connections & Penthouse Guide to Cyber sex books. The highest quality legal BBS ready GIFs around. Sales base for Interactive Amateurs BBS Ready CD-ROMS. Since 1986. Sample GIFs on 1st call. Voice Support: 407-447-9594

Nitelog BBS (408)655-1096 Monterey, California. Adult files, Dos, Windows, Mac, Amiga files. Internet services: Email, newsgroups, SLIP, PPP, web, domain name service, outgoig telnet, incoming telnet to nitelog.com rlogin, FTP, gopher, archie, finger, whois, rshell, rawtcp. Huge file section. Also available on BBS Direct. For info on BBS Direct dial 1-800-745-2747 - save \$\$ on long distance

SEED.NET Business Incubator BBS (412)487-5449 Glenshaw, Pennsylvania. FirstClass 6 line. 28,800bps. Online incubator for business. Apply for SEED Capital for your business online! OneNet, PGH.Net and Full Internet access. Nation's premier MAC-based service bureau. News/Finance feeds. Start-up expert help. Acct., Mgmt., Const. Legal Inventor, entrepreneur areas. 7CD Conf. Infopreneurs lease BBS space. Disc. prdts. and more!

The Ebony Shack Collection (419)241-4600 Toledo, Ohio. The World's largest collection of exotic women. Call the E-II BBS @ 419 241-7501, IP 205.148.211.3 Excalibur, or TSDI BBS @ 419 241-4600, IP 205.148.211.2 Worldgroup, with FULL Internet services, real time Worldgroup chat. 18 CD's, 150k files. Major credit cards, 900#, BBS Direct. If you love variety call one of these BBSes today. All adult BBS.

RAIN (Random Access Information Network) (503)695-3250 Corbett, Oregon. Credit cards available online. Demo users 15 m. daily, subscribers 90m. Extensive file areas (45,000) files for all operating systems. Latest shareware & GIFs. 600+ conference areas including Usenet & all RIME conferences. Satellite feed, CDRoms, Timedoor, games, chat areas. Adult areas.

THE ADULT HANGOUT BBS (508)746-6010 Plymouth, Massachusetts. A bbs devoted to adults. Over 100,000 ADULT files online. Matchmaking, chat, adultgames, national net-mail, adult flower shop, adult CD-Store, adult service directory, adult classifieds, voice personals and much more. Local access in 1510+ cities worldwide. Call and join in the fun. Must be 18 or older to call.

Genesis BBS (510)704-1472 Berkeley, California. The Small & Home Business Support System! 5+ Gigs shareware, Internet e-mail & newsgroups, many local forums to help you start or run your business, daily news, Electronic Business Yellow Pages, Special interest videos & CD-Roms, and much, much more.

WoW! Models Online (512)472-1921 Austin, Texas. WoW! Pictures world famous glamour models are now online. Our studio produces all original, high-resolution JPEGs of our beautiful models. Send private email and chat with them! Attention Sysops: our photographs have millions of downloads and we create new material all the time. Internet using FirstClass Client 198.6.201.230 port 3004

1 BIG RED CONNECTION (540)371-2443 Fredericksburg, Virginia. Central Virginia's Premier Online Service. All Hayes Optima 28.8Kbps Fast modems, Full Internet access, Many Interactive Games, Chat, 4Gigs of files (all latest tech. utilities, games, home, office, educational). Liberal free time. Attractive prices.


Mac Line (608)233-9487 Madison, Wisconsin. Bulletin board for Macintosh users. Running FirstClass software at 28.8Kbps. Mac files, messages, and chat. 3 CD's with tons of shareware. Macintosh news and Apple press releases. Internet e-mail and usenet newsgroups. For more info email: info@macline.com

SOCIAL.NET (610)409-0400 Philadelphia, Pennsylvania. Meet hot guys & sexy ladies online now. Hot nationwide chat, 100's of local personal ads many with phone numbers, 1000's nationwide Internet personal ads, singles, couples, swingers, all lifestyles, adult GIFs, 15GB file library, member GIFs many adult, 32 lines, never busy, games, raves, dating registry, Internet access and more. Free for ladies.

Atomic Dog BBS (617)279-3561 Stoneham, Massachusetts. WorldGroup Windows and Win95 access. Shareware and games. Member of ASP and AOP. SLIP, telnet, ftp, Internet e-mail. Multiplayer DOOM/Heretic/Descent & others. Online games and chat. 7 CD-ROMS & growing. Online shopping - home of Atomic Dog Software. No fee for basic access. Stop by and have some fun. Telnet: atomicdog.com (ANSI/ASCII/RIP supported)

The Boston Dungeon Society (617)397-8844 Boston, Massachusetts. Internet Domain: bds-bbs.com (99.242.194.90) Dedicated to those interested in the consensual domination & submission lifestyle (B&D, SM, BDSM), two teleconference systems, SIGs, Matchmaker, run by the author of The Loving Dominant. Don't Dream. Live.

"The Good Guy in the White Hat"



John O'Connor Publishing Ltd

- Always new titles
- Shareware
- Fantasyware™
- Wholesale only

CD-ROMs
Caddys too!

Watch for our ads

High profits.

Specializing in PIXIS products and GIF discs from Denmark.

Sysop resellers wanted. Many earn hundreds monthly selling CD-ROMs.

(609) 875-8897

VIDEO Graphics Online

Download Exciting Computer Images and Animated Movies!

Have a BLAST viewing the HOTTEST, most beautiful women in Southern California.

CHECK IT OUT!

IT's The LATEST

IT's The HOTTEST

- ✓ DOS Win95 & Mac Files
- ✓ E-Mail Around the World

WORLD'S ONE STOP GRAPHICS BBS

Modem: **909-689-9229**

(No per min./hty fees)

Games • Chat • E-Mail • MoviePICs • Photos • Friends • Fun • Forums

Welcome to **AMSTERDAM'S**

HOT & HEAVY

The World's BIGGEST Int'l Hot Web Site

- Over 15,000 Hot GIFs & JPEGs at your FINGERTIPS
- More than 300 Videoclips for your downloading pleasure
- Hook yourself up to our **INTERNATIONAL SWING FORUMS**
- Private mailboxes that steam
- Direct order from extensive on-line CD/Video warehouses
- Others can't compete with our prices as low as \$0.06/mn & you pay only per minute on-line

\$0.06/mn

www.hh.nl **Now**

*up to Feb 28, 1996 - Must be above 21 yr.

Adult Fantasy BBS (703)359-2911 Washington, DC. The original and largest adult bbs in the D.C. metro area. 6 hrs free time, 68 lines, live chat, matchmakers, MailLink, Networked message bases, full internet slip access, files, games, weekly meetings and more. Running on MBBS Worldgroup See our home page at <http://www.adf.com> or Telnet to adf.com all lifestyles welcome.

World Data Network (703)620-8900 Washington, DC. Since 1984, Internet: telnet wdn.com (e-mail, ftp, gopher, newsgroups & telnet), 50 ports, 28.8k modems, 80 doors, ASP and AOP member, over 80,000 files for download, 1,000,000+ callers. Authorized PCBoard reseller and installer. Home of Capital Area SysOps Association.

The ChiTown Network (708)356-4417 Lake Villa, Illinois. ChiTown uses an Excalibur BBS package that allows for True-MultiTasking. This means you can chat, play games, download and upload all at the same time. ChiTown offers Internet Mail, Usenet Groups, Multi-Media and Multi-Player games. This BBS requires the use of Windows! Call today and experience the technology of tomorrow!

Chicago Syslink (708)795-4442 Berwyn, Illinois. Currently the largest TBBS games BBS, we offer something for everyone. New CD-ROM online weekly, financial news, MicroMatch, chat, files, Internet email paging service and a whole lot more. Lots of friendly business folks having a good time online.

Exciton BBS (714)699-6780 Orange County, California. High resolution image (JPG) catalog of women & men's lingerie, women's accessories, books & games, lotions, toys, and adult novelties. Online ordering, secure credit card transactions, free access. Enhance your love life.

Cyberia (717)848-1666 York, Pennsylvania. Cyberia is an excellent online community. We specialize in providing easy access to the world of online services. Call or Telnet to cyberia.com for your free trial. Also visit our World Wide Web page at www.cyberia.com. We also offer flat rate direct internet (SLIP/PPP) connections, and Internet training seminars. Call 848-1439 voice for info.

Baud Stiff BBS (718)886-6988 Queens, New York. The new BBS where there's never a dull moment. Featuring multi-line live chat, topic forums, games, files, special events, and more. Mature atmosphere where adults can be themselves. Come find out what you're missing. When the Internet leaves you bored stiff, call Baud Stiff. The People BBS. (2400-28,800)

The Emporium BBS! (817)543-4250 Arlington, Texas. One of the largest collections of adult files. Over 20,000 adult files online. Adult games online, with online chat and messages. Adults only. Must be 21 years of age or older. Easy, fast adult access w/valid credit card. VISA, Discover, AMEX.

Panasia BBS (818)763-1158 North Hollywood, California. We offer Internet email access and carry all conferences for the Intellect, ThrobNet, U'NI-net, and ILink echomail networks. Qmail QWK/REP door. Proof of age required for adult access (includes FAXmail service). Modest but high quality file area.

Girls Next Door BBS (860)721-1341 Wethersfield, Connecticut. View hundreds of photos of Amateur and Professional Figure models, Showgirls, Nude Photo Gallery and more. Graphic terminal program required to view photos which can be downloaded free. Free Demo Area. \$5.00/month or \$50.00/year membership fee. Dnld. Membership Form. Adults 21 and over

Enchanted E-Books (909)793-3503 Redlands, California. We are an online publishing and bookselling company, providing electronic-books to the reading public. We specialize in the classics and original works by contemporary authors. Free Access. Free Sample E-Books available. See our Web site at: <http://www.e-books.com>. For more information & Free catalog write: info@e-books.com

Mentertainment Online (914)737-0443 Peekskill, New York. Gentlemen's Clubs Reviews, thousands of images of real Entertainers, bikini, topless and nude, all with names and current locations of where to meet them in person! National clubs locator database, free trial access. Adult industry Superstars live online chat, all original images taken on location by our staff. 18 and over only.

ULTRA TECH BBS (914)838-0577 Beacon, New York. PCBOARD 15.22-OS/2 Running 2 lines now and growing to 4 soon We will also have FULL Internet Access this year Join Now and save \$\$. Many online games. 15 CD's. You are only Charged for the time you are online, not monthly. Adult and non-adult cd's online.

FOR ADULTS ONLY Bulletin Board System (916)962-3973 Sacramento, California. Minimum member age 21. Sacramento's premiere adult chat and files BBS. 9+ GIGs of adult graphics, games, erotica files. Friendly members nationwide. Referred by Playboy, Adult BBS Guidebook, EIDOS, and Joy of Cybersex. Free four-hour trial period. Download first logon. MasterCard and VISA accepted.



PORTMASTER AND IRX COMMUNICATION SERVERS!

Dial-up & low-cost, leased line router & terminal server...
 Portmaster: AFFORDABLE Dial-up internetworking, remote user access, LOWEST COST PER PORT! TCP/IP AUI/BNC/10B-T, SNMP, GUI, PING, TELNET, RLOGIN, TRACE, RIP, SYSLOG, HOST DEVICE EMULATION, DNS, SECURITY, SLIP, PPP, UDP, ARP, LOAD BALANCING & MORE...

Communications Servers		
10 PORT: \$2,156	20 PORT: \$2,636	30 PORT: \$3,000
Option: One Synchronous port up to T1 \$700		
Routers		
IRX-111 ONE HIGH SPEED & ONE LOW SPEED	\$1,916	
IRX-114 FOUR HIGH SPEED & ONE LOW SPEED	\$2,600	



SOLUNET, INC.
 "Your Inter-Networking Partner"
 1591 Robert J. Conlan Blvd., Suite 100
 Palm Bay, FL 32905
 TEL: (407)676-7947
 FAX: (407)676-0809
 Internet: mike@solunet.com

HOME PHONE BILLING IS HERE!
 Put Your Access Fees on the Users Home Phone Bill!

Grab the impulse buyer! Eliminate credit card concern. It's simple, it's fast and it's easy. Set up an account and enjoy much higher usage and more sign-ups. (You can even charge to your own phone). *Now: Check Cards, too!*

Contact Us For More Details:
MORE INFO: telpay@pdsig.com
FAX-INFO: (703)904-9888 #253
BBS: . . . (619)749-2741
FAX: . . . (619)749-6384
VOICE: . (619)749-7049
E-MAIL: bjnash@pdsig.com
MAIL: . . TEL PAY CLEARINGS
 1531 Avohill Dr.
 Vista, CA 92084



DVORAK ONLINE by John C. Dvorak

MICROSOFT, BILL GATES AND THE INTERNET

It's been amusing to watch Microsoft go through hell trying to persuade the investment and user communities that it's serious about the Internet, or even that it knows jack about the Internet.

We have to recall the history of Microsoft and its lack of commitment to online anything. Its history dates back to a horrid telecom package called Access. This software was unusable and died a quick death in the marketplace. Eventually the name was reused for the database manager in some corporate effort to exorcise the curse. The curse remains. If you want to see yet another horrible attempt at online just look at a copy of the telecom module for the old Microsoft Works for DOS. Gosh-awful.

What's weird is that Microsoft has always been adept at copying other people's ideas and concepts. Knowing this gives us insight to better understand Microsoft and online software, the Internet, anything related to connectivity. What it tells me is that the company didn't even care enough to copy the basic structure of a Procomm or a Telix or even Smartcom. It never lacked wherewithal to go aggressively after Lotus 1-2-3 and WordPerfect. But it sure didn't seem interested in telecommunications. It wanted to fail. It hates this stuff.

What underlies this bias is history and the basic tenets of Bill Gates and the personal computer. The company began as part of the early days of the PC revolution, when getting DIS-connected was the idea. People were revolting against batch processing and mainframes. There is no evidence that this notion of being DIS-connected has changed much.

It must pain the company to know that with Windows NT it has the perfect knife to thrust into the heart of Novell and it can't bring itself to do it. It runs counter to the DIS-connected concept. Ask an old-timer at Microsoft and they'll tell you that until a few years ago the internal networks at Microsoft had hard-wired switches at people's PCs and that's how they'd connect to the network.

Bill Gates has no interest in being re-connected, and as far as he's concerned it's a return to the old ways of the mainframe. This time with a new HTML face. This talk of diskless terminals has to have him worried. It's an obvious retro movement.

Microsoft has had little involvement with the Internet and its culture. Microsoft makes operating systems, programming languages and applications

for PCs — *personal* computers. The emphasis is on the word "personal." Like Bill Gates used to say in his speeches, "We at Microsoft sell code." The ideal situation for a company that "sells code" is to sell to lots of individuals — the more the merrier.

To Microsoft the Internet and the whole online world is some sort of weird odd thing. If you want to see just how pathetic is the Internet awareness of Microsoft then take a copy of Encarta 95 [*Microsoft's multimedia encyclopedia - Ed.*] and look up the Internet. There's nothing.

It's all part of the Microsoft Corporate culture — the single lone user mentality. Not that this is bad, mind you. After all, this mentality made Microsoft the world's biggest software company. But it must pain them to no end to watch the Internet get all the glory. It must pain them to watch Jim Clark suddenly become a billionaire in one year flat. A lot of what's going on has got to pain Microsoft.

What's annoying is that Bill Gates doesn't show some Moxie and come out with some honest opinions. "Hey the Web is slow and inefficient!" Instead he jumps on the bandwagon in typical Microsoft fashion. But unlike other bandwagons such as pen-based computing this bandwagon is headed in the wrong direction as far as Microsoft is concerned. Microsoft needs to encourage diskless terminals and Java applications as much as it needs to change the company name to Buggy Software, Inc. Simply put, it's not a good idea.

One has to assume a couple of things regarding Microsoft's involvement with the Internet. 1) The company has to sink the notion of Java applets and network-centric computing; 2) Microsoft is totally clueless (at the moment) in understanding HOW to sink the notion of Java applets and network-centric computing.

Some other aspects we must consider. The possibility exists that Microsoft is panicking at the executive level. I honestly believe the company is having a lot of meetings regarding online in general and the Internet in particular. Panic means lots of mistakes.

Microsoft also has to be annoyed that the Internet, as a johnny-come-lately, has overshadowed the CD-ROM and multimedia scene — one of the arenas successful in large part due to Microsoft's promotion. It's hard to imagine how much money Microsoft lost selling Microsoft Bookshelf for all those years when only 100 people had CD-ROM drives. Unlike Winpad, this entire area was pioneered by Microsoft so it stuck it out. Bill Gates knew that CD-ROMs were an important media and stuck with them.

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "Inside Track" column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*. John can be reached at mailto: dvorak@aol.com

Microsoft didn't stick with telecom, palmtop computing, MSX or a slew of other things where it played follow the leader. (Exception note: Of course where it was inventive with concepts like Microsoft at Work, Microsoft at Home, it also seemed to back off when things didn't go well. I recall when every other item in the news was about Microsoft at Work. Now what?)

It's now clear to me that Microsoft is at its wits' end, in general. The company needs to rethink its entire organization and this Internet fiasco is the perfect opportunity to do so.

Microsoft should take the hint from IBM and spin off some small companies. A clone of Netscape would be a perfect start. DO what Netscape is doing — browser technology and network operating system technology. Furthermore it should do a public offering like Netscape and get a lot of

attention for being a high flying stock. Call it Microsoft Network Inc, or Micronet, or Zapco — just make it a separate corporation with Microsoft holding majority ownership until it goes public.

Microsoft cannot be all things to all people. It doesn't need to be involved in every fad and trend that comes along. The desire of Bill Gates to rule the universe — “be the IBM of Software” — is hurting the company, especially when trends counter to the original charter of Microsoft crop up.

I used to say that Microsoft should be busted up by the government. Something like that will never happen with the stock market over 5000 and everyone making money. Now I suggest that Microsoft bust up itself. Even more millionaires will come out of it and Microsoft can settle back to its primary business. ♦

DVORAK'S RECIPE NOOK

Roasted Garlic Heads

I think the idea of putting a whole chunk of garlic on a plate was popularized on the West Coast although the idea is European. It's come in and out of vogue, and not too many home cooks ever think to do it. If you like shopping at those huge discount warehouse stores such as Costco you'll find that they sell large bags of garlic heads for a pittance. The only way you can plow through the whole bag is to roast up the heads and serve them to guests. Here's how.

Garlic bakes effortlessly. If you don't want to get fancy just throw the heads in the oven and cook them at 375 for about 45 minutes. What's produced is a mild garlic puree-like goop that you can suck out of the clove or spread on a piece of bread. If you want to get fancy you cut the heads in half (across the clove to expose the raw garlic, and bake them cut side down in some olive oil. This produces a chewier sweeter cooked garlic. It also adds the risk of burning though. Burnt garlic is quite bitter. Serve the roasted garlic hot or warm. It has an insipid quality when cold.

You should note that eating garlic this way does not produce a garlic smell on the person eating the garlic. Garlic's potent aroma is a reaction that develops within the garlic meat when it is crushed raw and allowed to stand for a few minutes. This crushed garlic chemistry is also critical for garlic to develop its noted anti-bacterial and anti-viral properties, according to a



paper given at the Oxford Food Symposium. It's doubtful that the health benefits of baked garlic are the same as they are for crushed garlic, although the method of cutting the head in half would produce some of this “crushed” effect. While this information is about as obscure as possible, it's worth noting. This also explains why you seldom develop the garlic aroma on your person if you are one to swallow whole, uncrushed, cloves as many health food addicts do.

GARLIC SHOPPING TIPS

When buying garlic make sure the heads are firm. This is the key. When garlic is old it dries up and the head doesn't stay solidly packed.

You should note and experiment with the different varieties of garlic. The red-dish so-called Italian garlic is said to be the most pungent. There is also a variety of garlic called elephant garlic which is a milder garlic that has enormous cloves. Seldom used for roasting it can almost be eaten raw. I've used it in various dish-

es where large slices of it look good in the visual context of the dish.

GARLIC AND GASTRO-INTESTINAL PROBLEMS

Some years ago, I was using a lot of elephant garlic for a sweetbreads recipe I had developed. Suddenly I noticed that I developed a rather embarrassing case of gas. Since this never happened before, I was interested in finding out what went wrong and discussed this with a garlic grower from Sonoma county. He said that when garlic is over-fertilized it can produce these results. Apparently onions do the same thing when over-fertilized. I would guess that some of the fertilizer compounds alter the components within the garlic or onion and become slightly toxic. If you have trouble eating garlic or onions, this may be the reason.

[Editor's note — In some circles, garlic is thought to be sovereign against bacteria, high cholesterol, colds, fungus infections, impotence, diabetes and of course vampires. The Garlic Information Centre at <http://www.mistral.co.uk/garlic/> offers a wealth of information about the medicinal benefits of garlic. The Garlic Page at <http://www.broadcast.com/garlic/> includes news, recipes, growing tips, health information and directories to garlicky vendors and restaurants. Then there's The Garlic Project at <http://www.almaden.ibm.com/cs/showtell/garlic/> whose goal “is to build a multimedia information system (MMIS) capable of integrating data that resides in different database systems as well as in a variety of non-database data servers.”] ♦

Sysops who win know what it takes.

Eight of the top 15 winners in the Boardwatch 100 run TBBS.

You've set your goals and made the commitment to build a BBS. But hard work alone does not guarantee a win. The best way to become a winner is to watch what the winners do and follow their example.

It doesn't matter if you define winning as making the top 10, the top 20, the top fourth, the top third, or even the top half – you'll see more winners use TBBS than anything else. It's easy to get lost in technical details when selecting BBS software.

However, if you focus on giving callers what they want, the

choice is easy – Winners run TBBS, and their callers love them for it. If winning is your goal, call (303) 699-6565 for more information and access to a demonstration system.



Boardwatch reader's choice BBS list copyright © 1994 Jack Rickard, All rights reserved. Reprinted by permission.

TBBS. The BBS people love to call.



15200 E. Girard Ave.
Suite 3000
Aurora, CO 80014

IN ORDER OF NUMBER OF VOTES RECEIVED BETWEEN JANUARY 1 AND JUNE 30, SOFTWARE LINE

TITLE	PHONE	DESCRIPTION	SOFTWARE LINE
1. Software Creations	500-368-7139	The Primary Source for Entertainment Software	PCBoard
2. EXEC-PC	414-789-4360	Largest dial up BBS for shareware software	Custom
3. GLIB	703-578-4542	Gay & Lesbian information, Internet email, live chat	TBBS
4. Monterey Gaming System	408-655-5555	Custom interactive gaming and multi-user conferences	Custom
5. Blue Ridge Express	804-790-1675	Large files base with 3 Gigabytes and CD-ROMs	TBBS
6. Deep Cove BBS	604-536-5885	News, publications, Internet email, shareware	TBBS
7. AlphaOne Online	708-827-3619	Adults only, matchmaking, personals, email	TBBS
8. America's Suggestion Box	516-471-8625	13 Gigs of Shareware, Internet email, Usenet newsgroup	TBBS
9. Lifestyle Online	516-688-5390	Chat system, adult lifestyles, personals, email	OraComm
10. Prodigy Genealogy	800-775-7714	Information and help of searching for people	TFP
11. Chrysalis	214-690-9295	34 CD-ROMs online, Internet email, online games	TBBS
12. Pleasure Dome BBS	804-490-5678	Adults only, matchmaking, Internet email, chat	TBBS
13. INDEX System, The	404-924-8472	Online publications, BBS lists, Internet email, Fidonet IC	TBBS
14. Pennsylvania Online	717-657-8699	Internet accounts, 10 Gigs online, family BBS	Maximus2
15. Springfield Public Access	413-536-4365	4000 Usenet newsgroups, full Usenet	PCBoard
16. OS/2 Shareware	703-385-4325	OS/2 support and shareware files	SHS
17. DSC	614-224-1635	Full Internet, Internet accounts, full Usenet	PCBoard
18. Wizard's Gate BBS	708-820-8344	No fees, full access on first call, 12 Gigs online	TBBS
19. Aquila BBS	615-383-0727	Illinois's largest filebase, message base	PCBoard
20. Nashville Exchange, The	919-481-9399	Internet, Usenet, Fidonet, shareware, online games	RA Pro
21. deltaComm Online	816-587-3311	Distribution & support for Telix	Custom
22. File Shop BBS, The	317-359-5199	US & World News, Stock information, full Internet	PCBoard
23. Traders' Connection	216-381-3320	Largest classified ad database, national access	TBBS
24. Son BBS	610-439-1509	Large message base, shareware, ads	TBBS
25. InfoService	908-205-0189	General BBS, messages, files, chat, email	Falken
26. The	703-749-2860	Since 1982, online games, games, matchmaker	PCBoard
27. Systems	914-667-4066	9 Gigs online, chat, messages, adult area	Wildcat
		Internet, Usenet, shareware, adult area	TBBS
		Internet, 35,000 files, 100 online games, echos	TBBS
		5.7 Gigs, 35,000 files, 100 online games, echos	TBBS
		Large shareware system, chat, Internet email	PCBoard
		National 800 access, 10 Gigs online	PCBoard
		games, Usenet, Internet, shareware	PCBoard
		support, 5 Gigs online	PCBoard
		files online	PCBoard

Companies who win know what it takes.

And it takes TBBS.

Winning in the marketplace takes more than good ideas and hard work – it takes the right tools. Businesses who know how to win have

an instinctive ability to recognize tools which have that rare combination of

power, flexibility and reliability that make them special. Average tools

yield average results, even in the hands of a craftsman. But a tool

that is right for the job makes a crafts-

man of anyone who learns to use it. You can identify such a tool

when you continue to see it used by winners year after year.

**"Creative Labs Blasts
To Front Competitive
Multimedia Field"**

Creative Labs®

Manufacturer of the Sound Blaster
BBS # (405) 742-6660

**"Microsoft Competitors Fear
Its Dominance Unhealthy
For Industry"**

Microsoft®

Largest Software Developer Microsoft
Download Service

BBS # (206) 936-8735

**"Intel Crushes
Competition In Battle For
CPU Supremacy"**

Intel®

Producer of Microprocessor and
PC Enhancements

BBS # (503) 645-6275

The fact that for 14 years, TBBS has been the choice for more industrial-strength

business BBS than any other software speaks for itself. If winning is your

goal, call (303) 699-6565 for more information

and access to a demonstration system.



eSoft
eSoft, Incorporated

15200 E. Girard Ave.
Suite 3000
Aurora, CO 80014

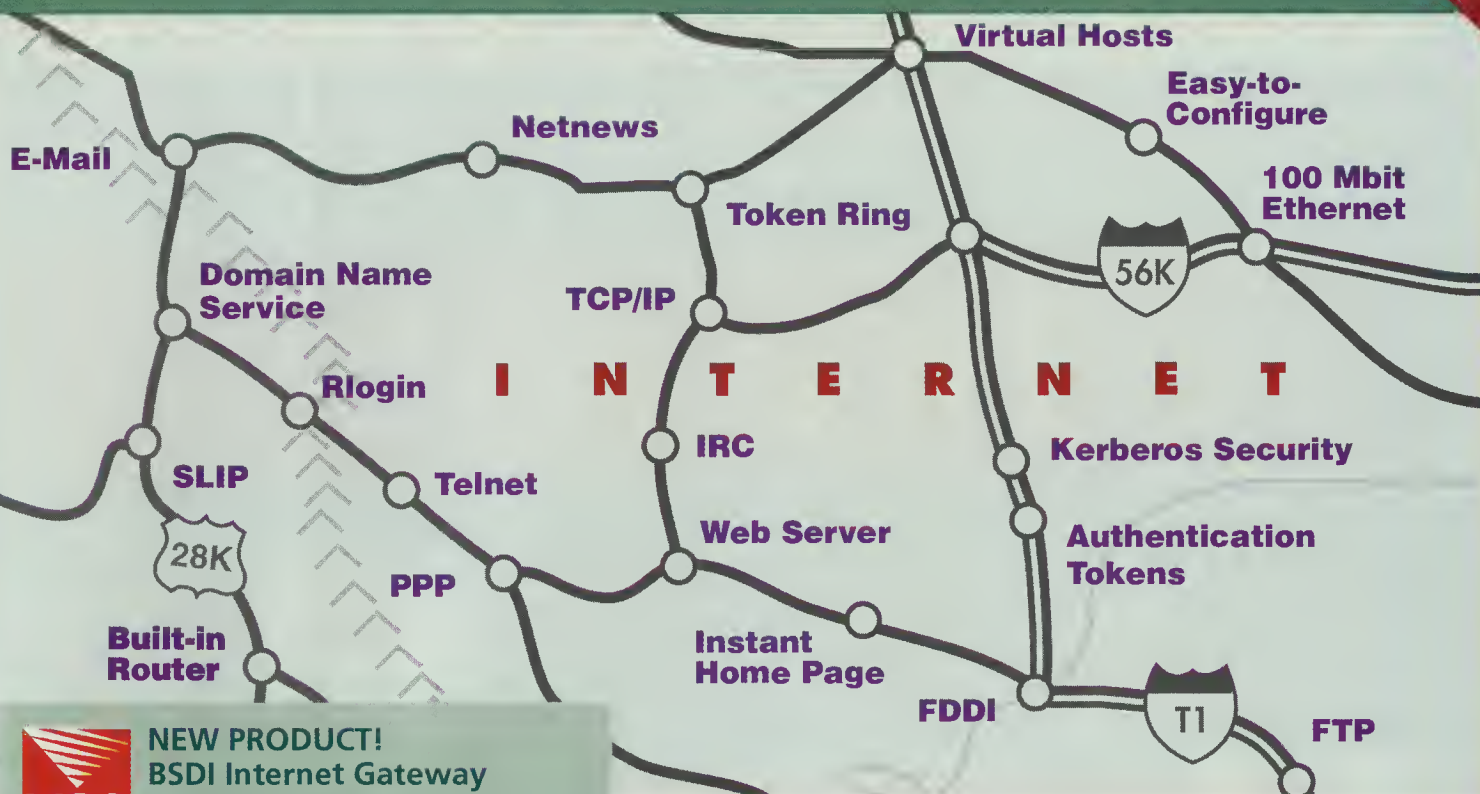
TBBS. The BBS people love to run.

Advertisers

Accu-Weather, Inc.	87	H&H Internet	136
Adept Communications, Inc.	19	Hayes Microcomputer	15
ADP Autonet	51	High Velocity Software	59
American Banking Systems	27	Index System, The	69
APDI.	33	John O'Conner Publishing	136
Arizona Mac Users	76	Legend Graphics	136
Banana Programming	87	Logicom, Inc.	23
BBS Technologies	127	Media House Software, Inc	77
Berkeley Software Design, Inc.	143	Michael Wolf & Company	31
Boardwatch Subscription	134	MMB Development.	80, 113
Bob Duckworth Consulting	99	Modern BBS/VSI	84
BSI Technologies	40	MurkWorks, Inc.	41
CardService of MetroWest	113	Mustang Software, Inc	12, 37, 63
Celestial Systems	92	NCIT.	93
Cheersoft	119	NTTC	104
Cinecom Corporation	126	ONE, Inc.	105
Comtrol Corporation	21	Online Search	99
D.M.S.	76	Planet Systems, Inc	17
DataSafe Publications, Inc.	24, 24, 88	Power Computing	47
Digital Consulting Services	112	ProDesign, Inc.	97
Dome Systems	99	Sirius Software, Inc.	65
Durand Communications Network	72	Solunet, Inc.	137
EMS Professional Shareware	76	Tel-Pay Clearings	137
eSoft, Inc	6, 140	Tessier Technologies	80
Excalibur Communications, Inc.	144	UNI-ROM	92
Firmware of Minnesota	51	Yokohama Telecom	118
Galacticomm, Inc	2		
GTEK	81		
GW Associates	95		

BSDI Makes the Net Work with All-in-One Internet and Web Servers

Call about
BSDI's
SYSOP SPECIAL!



NEW PRODUCT! BSDI Internet Gateway for Novell Networks

It runs with NetWare The new BSDI Internet Gateway for Novell® Networks brings the power of the BSDI Internet Server to your IPX networks. Your Novell PCs become powerful Internet workstations – **without the complexities of TCP/IP networking on the desktop.** Built-in E-mail, FTP and Web server software lets you establish the **Internet and Web presence for your entire organization.** Using BSDI's sampler of top Internet applications, you can quickly equip existing PCs as full-featured Internet workstations. What's more, users can also run their favorite WinSock-compliant applications. Best of all, even network administrators who are unfamiliar with TCP/IP networking can connect an enterprise to the Internet in a couple of hours. No administration headaches from running dual stacks on the desktop. No worries about security for your existing Novell networks. Just reliable Internet connectivity with the high power and low price that Internet innovators worldwide have come to expect from BSDI - The People Who Make The Net Work.

For Instant Novell-to-Internet Connectivity, Call 1-800-380-2737!

"I can't think of anything that would make the BSDI Internet Gateway a better product."

– Samuel S. Lowe, SC&G CPAs & Consultants

BSDI Internet Server for Enterprise Gateways, Intranets, Web Sites, and ISPs

The BSDI Internet Server delivers the multi-purpose networked computing power you need to establish enterprise Internets and intranets, run high-volume Web sites, and provide full-featured Internet services. BSDI's server software integrates the robust BSD/OS kernel and its bulletproof TCP/IP with PPP and SLIP for top Internet throughput. Built-in E-mail, FTP, Netnews, and Web server software is Net-ready. In fact, BSDI-powered Pentium processor servers outperform workstation platforms that cost thousands more.

The Cost-Effective Internet Server So that you can get the most from your Internet investment, each BSDI-powered server can support multiple Internet and Web domains. BSDI's built-in router software saves the expense of an external router.

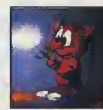
The Choice of Internet Innovators Worldwide Now you can confidently deploy industrial-strength Internet and Web connectivity throughout an organization of any size. The BSDI Internet Server includes 60 days of free telephone support and a 60-day money-back guarantee, so you can establish your Internet and Web presence with no risk.

To take advantage of BSDI's Sysop Special – a limited-time discount offer for the BBS community – call 1-800-380-2737!

"BSDI designed the system with the Internet and World Wide Web in mind. The BSDI Internet Server is exactly what people need for their World Wide Web sites."

– Dan Rasmussen, Internet Systems, Inc.

Berkeley Software Design, Inc. (BSDI)
5575 Tech Center Drive • Suite 110
Colorado Springs, CO 80918
PH: +1-719-593-9445
FAX: +1-719-598-4238
E-Mail: info@bsd.com
WWW: <http://www.bsd.com>



BSD
BERKELEY SOFTWARE DESIGN, INC.

The People Who Make The Net Work

BORED?

Sure, all BBS systems are a blast - for the first five minutes. But if you get rooked into one of those knockoff bulletin boards, make sure it comes with a good, strong espresso maker. You're headed for the land of Z's.

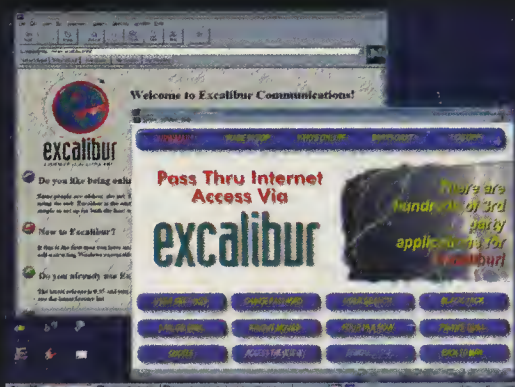
BOARD!

Choose **Excalibur** BBS, the original bulletin board system for Windows, and you can give up caffeine for good. You'll get all the stimulation you can handle from the accelerated bi-directional protocol that lets you upload, download, chat, play games, pat your head and rub your tummy all at the same time.

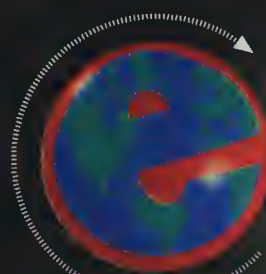
Need another boost? Get to know Guinevere - our new, on-line database that's based on HTML, the same spec as the World Wide Web. Or hop on your surfboard - Excalibur now has full Internet connectivity. And 3rd party developers can get their jolts

from our Application Programming Interface (API). It lets you create everything from Internet gateways and databases to shopping malls, interactive games and more. You can listen to the experts: *Windows Magazine* named Excalibur BBS to its 1995 Win 100, and *BBS Magazine* said our graphics "make the likes of America Online pale." Or you can listen to other users: more of them operate Excalibur than any other graphical bulletin board system.

All of them will tell you the only way to really stay wired is to modem in to Excalibur at **918.496.8113** or call toll free 800 excal.bbs. Get it today. And get your Z's somewhere else.



voice 918.488.9801 e-mail sales@excalbbs.com web <http://www.excalbbs.com> fax 918.491.0033
Excalibur Communications, Inc., 2530 East 71st Street, Suite E, Tulsa, Oklahoma 74136



excalibur
COMMUNICATIONS, INC.